



Revised Version of the GRI Electric Utilities Sector Supplement

Invitation to Comment

This document is an invitation and request to all interested parties to provide their feedback on the output of the Electric Utilities Working Group. All comments received will be reviewed by the Working Group in their final meeting in early 2009. In providing your feedback you are requested to use the accompanying form since this will facilitate the comparison and consolidation of responses. For all of the issues, the key questions are:

- 1) Should this indicator/commentary be included in the Sector Supplement?
- 2) What is the relative importance to measure this issue compared to other reporting issues in the electric utilities sector?
- 3) Does this indicator effectively measure the underlying issue?
- 4) Do you have any suggestions on how improve this indicator protocol/ commentary? If so, please specify.

How to Respond

Please send your response using the accompanying form by **Monday 5 January 2009** to Katherine Miles Hill, GRI (miles@globalreporting.org).

Background Information

In 2006 GRI convened a global, multi-stakeholder process to involving key international electric utilities sector representatives and its stakeholders to develop a Sector Supplement, sector specific sustainability reporting guidance, to be used together with the GRI Sustainability Reporting Guidelines. A pilot version of the Sector Supplement was released in December 2007 and subsequently been used in its pilot form.

The Sector Supplement is now in its last step in the development process which involves a formal review of experience with the pilot Sector Supplement. The intent of the EUSS is to ensure that the GRI Framework covers the material sustainability issues for the Electric Utilities industry in a manner that is appropriate and meaningful for the sector. In order to ensure this, the Working Group has spent time evaluating and revising the pilot Sector Supplement indicators/disclosures, and creating technical protocols for each of the indicators and commentaries on the G3 Guidelines. The sector specific indicators and disclosures have been created to cover material issues for the sector that were not already addressed by the GRI Guidelines. The G3 commentaries are intended to explain how to apply certain indicators in the context of the Electric Utilities Industry.

This document contains a revised version of the Sector Supplement released for its official 90-day public comment period. After the public comment period the Working Group will review all the comments received to create a final set of indicators and protocols for submission to the GRI Technical Advisory Committee (TAC). Once reviewed the final draft will be sent to the GRI Board of Directors for their review and approval. On receipt of their approval, the finalized EUSS will be released and will become a core expectation of GRI reporters in the sector.



This document contains the following:

- 1) A table summarizing the full contents of the EUSS
- 2) Full listing of the indicators/disclosures with their supporting technical protocols and commentaries to the G3 Guidelines. These are organized by category:
 - Organizational Profile
 - Economic Section
 - Environmental Section
 - Social Section (*Labor Practices and Decent Work, Society, Product Responsibility*)



The GRI Electric Utilities Sector Supplement

DRAFT FINAL VERSION

PROPOSED FOR PUBLIC COMMENT



Introductory Section for the Electric Utility Sector

Who is the Sector Supplement intended for?

The Sector Supplement is intended for organizations engaged in the generation, transmission, distribution or retail of electricity. The Sector Supplement content is developed to be globally applicable to electric utilities regardless of their type of generation, size, ownership or range of activities within the sector.

Based on the G3 Guidelines, the Sector Supplement provides reporting guidance on key aspects of sustainability performance that is meaningful and relevant to the electric utility sector. Reporting using this sector-specific guidance provides stakeholders with the ability to evaluate an electric utility's sustainability performance on economic, environmental and social factors that are comparable with other electric utilities using the GRI Reporting Framework on a regional, national, and international scale. It also helps them to track the utility's performance over time. Many of the topics included within the Sector Supplement could apply equally to a company's annual report.

Sector-specific guidance is provided in the form of commentary on the G3 Guidelines content and new sector-specific disclosures and performance indicators. This includes guidance on metrics, definitions, and calculation methods relevant to the sector. Some of the disclosures and indicators included in this Sector Supplement may be relevant to other sectors that have similar operational footprints or sustainability issues. Nonetheless, all aspects included in this Sector Supplement are important and appropriate for the electric utility sector and should be used to guide sustainability reporting in this sector (i.e., reporting on economic, environmental, and social performance at an organizational-level).

How Can Diverse Organizations in the Electric Utility Sector Use this Sector Supplement?

Sustainability reporting is a process, and it does not begin or end with a printed or online publication. The process of reporting could provide opportunities to assess an organization's policies and programs and the economic, social and environmental impacts of its activities. This assessment can help the organization to determine necessary steps for further improvement, and reporting on these will indicate changes over time. It often takes time to build a system for reporting, from selection of issues to be addressed, collection of necessary data, and determining the means to communicate the relevant information to the stakeholders (Reporting Principles found in Part 1 of the Guidelines should be referenced when determining report content). Some organizations may choose to introduce reporting on all material topics at once, while others may start with the most feasible and practical ones, and gradually expand the coverage over time. The breadth and depth of disclosures and performance indicators found in this Sector Supplement may pose challenges for reporters, especially for new reporters or small and medium sized enterprises, and it may not be possible to disclose all of the information elicited in this Sector Supplement at once.

In addition, due to the differences in generation types, size, ownership and governance, range of activities or applicable regulatory regimes of individual electric utilities within the sector, certain sector-specific indicators may not be readily applicable to all organizations in the sector. Therefore, reporting organizations should report on indicators that deliver most relevant and material information to their stakeholders.



Overview

Electric utilities provide essential and vital services to society and users. The services provided are crucial to the development and security of economies in all countries. Economic development must be achieved in a sustainable manner in order to protect key resource systems, and to provide for future generations. Specifically within the electric utility sector, a number of factors are fundamental in determining an electric utility's economic, environmental, and social sustainability performance as the generation, transmission, and distribution of electricity utilizes natural resources. These three sustainability factors - economic, environmental, and social performance – are captured by the disclosures and indicators included in this Electric Utility Sector Supplement.

Economic Factors:

Investments in new equipment and maintenance of existing infrastructure along with research and development of sustainable electricity generation, transmission and distribution, and end-user technologies all require significant financial resources. Stakeholders typically expect reporting organizations to develop strategies to appropriately allocate these financial resources, to provide reliable and high quality electricity supply into the future, to manage demand, and to provide shareholders and other stakeholders with the information necessary to assess the economic performance of the reporting organization.

Environmental Factors:

Stakeholders expect electric utilities to minimize the impact on the environment of the full life cycle of their business operations. Electric utilities are among the largest consumers of fossil fuels in the world, making fuel use/mix an increasingly important environmental concern. Fossil fuel combustion and other modes of electricity generation can result in wide spread environmental effects, including acid rain, climate change, radioactive and other contamination, and human health issues, if not adequately addressed in the electric power generation business. This has led electric utilities to consider strategies such as the installation of pollution control systems, development and utilization of power generation methods based on renewable energy and other non-fossil sources such as nuclear, wind, biomass, hydroelectric, and solar power, and to help meet demand with demand-side management solutions. These operational strategies include energy use reduction strategies as well as the shifting of electricity demand to off-peak hours of operation.

Social Factors:

Customers expect that electric utilities ensure the availability and reliability of electricity supply. In providing this electricity, electric utilities often engage stakeholders in decision making in order to achieve consistency with community goals and values. Electric utility assets and activities are often of a large scale, potentially impacting neighboring and distant communities. Stakeholders expect electric utilities to consider access to and affordability of electricity to all users for the overall sustainability of the community. The electric utility sector employs a workforce that can be exposed to potentially hazardous conditions such as high voltage electrical conductors and radiation at nuclear power facilities. Thus addressing workforce and safety issues are vital to the electric utilities' performance, since a qualified staff is fundamental to ensuring safe and reliable electricity services.



Overarching Issues for the Sector

In addition to the set of new sector-specific disclosures and indicators, the following three topics have been identified as key topics that require special attention by the electric utilities for sustainability reporting.

Electric Utility Sector Regulatory and Market Structure

Electric utilities often operate in a heavily regulated environment, which may vary across geographic locations of operations. Sustainability reporting by electric utilities is expected to provide clarity in terms of the specific regulatory and market environments in which they operate, and the availability of natural resources. In particular, implications of privatization, market structure, tariffs, governmental requirements and planning should be explicitly considered in the reporting. Some of these regulations are still emerging or developing, and stakeholders expect electric utilities to keep abreast of these requirements and incorporate them into their sustainability considerations and reporting.

Stakeholder Engagement

As providers of an essential service and as users of natural resources, stakeholders expect electric utilities to build trusting relationships with stakeholders in order to operate legitimately and sustainably. Across all economic, environmental, social themes described in this document, particular attention is called for the engagement of stakeholders. Electric utilities are expected to disclose their approach to effective stakeholder engagement. Specific areas for consideration include: stakeholder identification, means of engagement, level and weighting of stakeholder representation in decision making processes. At a minimum, stakeholders include customers, neighbors, investors, shareholders, regulatory authorities, interested organizations, workers and civil society, with particular attention to vulnerable constituents.

Contracting and Supply Chain Practices

Electric utilities are often able to use their market presence and purchasing power to influence the social and environmental policies and practices of their suppliers and contractors. In fact in some cases, many of the major social and environmental impacts occur well upstream or downstream of the reporting organization's operations (e.g., upstream fuel supply issues as well as downstream end of life considerations regarding electricity use). Contractors are often involved in various aspects of provision of electricity, and contractor's performance can affect the environmental performance and safety and reliability of the core operations of the reporting organization.

Electric utilities are often able to monitor and report on the performance of contractors, where they are integral to the utility's operations, in order to ensure minimal risks to workers and communities as well as to ensure safety, reliability and security of the electricity supply. Electric utilities are encouraged to disclose their supply chain policies and practices regarding the products and services they purchase or contract when these policies and practices are relevant to sustainability issues. In order to disclose these policies and practices adequately, electric utilities may need to consider information about contractor or supplier entities beyond the reporting boundary as defined by the GRI Boundary Protocol². Typically, these policies and practices include capacity building in suppliers and contractors, workplace safety, waste disposal, protection of human rights, regulatory compliance and remediation efforts undertaken.



Overview of the Guidance included in this document for the Electric Utility Sector Supplement

Organizational Profile

Electric Utility Sector-Specific

Aspect	Disclosure
	EU1. Installed capacity, broken down by energy source and by regulatory regime.
	EU2. Number of residential, industrial, institutional and commercial customer accounts.
	EU3. Length of transmission and distribution lines by voltage.
	EU4. Allocation of CO ₂ e emissions certificates, broken down by regulatory regime.

Economic Section

Electric Utility Sector- Specific Economic Disclosures on Management Approach

Aspect	Disclosure
Availability and Reliability	EU5. Management to ensure short and long-term electricity availability and reliability.
Demand-Side Management	EU6. Demand-side management programs including residential, commercial, institutional and industrial programs.
Research and Development	EU7. Research and development activity aimed at providing reliable and affordable electricity and promoting sustainable development.
Plant Decommissioning	EU8. Provisions for decommissioning of nuclear power sites.

Electric Utility Sector- Specific Economic Performance Indicators

Aspect	Indicator
Availability and Reliability	EU9. Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime.
Demand-Side Management	EU12. Average generation efficiency of thermal plants by energy source and by regulatory regime.

System Efficiency	EU13. Transmission and distribution losses.
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Environmental Section

Electric Utilities Sector-Specific Commentary on G3 Environmental Disclosures on Management Approach

Aspect	Disclosure
Materials	Long-term strategy for managing and phasing out high level and low level in-service PCBs.
Water	At the watershed level, include collaborative approaches to managing watersheds and reservoirs for multiple uses (e.g., irrigation, drinking water, ecosystem conservation, etc.). Also report long-term planning for securing water resources, for meeting the needs of both the utility and other stakeholders (e.g. local communities). This includes describing the criteria for managing maximum/minimum flow of surface water and volume of ground water are determined and maintained.
Biodiversity	Report approaches for pest and vegetation management along transmission and distribution corridors (e.g., use of Integrated Pest Management and Integrated Vegetation Management).
Emissions, Effluents and Water	Management strategy and storage methods for different types of radioactive nuclear waste, including: <ul style="list-style-type: none"> • Temporary and permanent storage; • Environmental, health and safety impacts of radioactive nuclear waste; and • Security measures according to the applicable management standards/legislative framework.

Electric Utility Sector-Specific Environmental Performance Indicators and commentary on G3 Indicators

Aspect	Indicator and Commentary
Materials	Commentary on EN1 Materials used by weight or volume. Report in-use inventory of solid and liquid high level and low level PCBs contained in equipment.
Water	Commentary on EN8 Total water withdrawal by source. Report overall water usage for processing, cooling and consumption in thermal and nuclear power plants, including use of water in ash handling.
Biodiversity	Commentary on EN12 Description of significant impacts of activities, products, and services on

	<p>biodiversity in protected areas and areas of high biodiversity value outside protected areas.</p> <p>Include Impacts of thermal discharge.</p>
Biodiversity	<p>EU14. Biodiversity of offset habitats compared to the biodiversity of the affected areas.</p>
Biodiversity	<p>Commentary on EN14 Strategies, current actions, and future plans for managing impacts on biodiversity.</p> <p>Report the impacts and mitigation measures of new sites and existing sites to the following:</p> <ul style="list-style-type: none"> • Forested areas (e.g., alterations to tree crown density); • Loss of indigenous species; • Landscape (e.g., impacts of wind farms, transmission lines); and • Freshwater and wetland ecosystems (e.g., downstream water quality including turbidity, sedimentation, siltation and water quality of reservoir and other water bodies). <p>Assessment and mitigation should consider conservation plans for indigenous species, alterations in the migration, breeding, or habitat of animals (e.g., fish passage) from the reporting organization's infrastructure (e.g., power lines and dams).</p>
Emissions, effluents and waste	<p>Commentary on EN16 Total direct and indirect greenhouse gas emissions by weight.</p> <p>Report CO₂e per MWh broken down by regulatory regime, for:</p> <ul style="list-style-type: none"> • Net generation from all generating capacity; • Net generation from all fossil fuel generation; and • Estimated net delivery to end users. This includes emissions from own generation as well as gross purchased power including line losses.
Emissions, effluents and waste	<p>Commentary on EN18 Initiatives to reduce greenhouse gas emissions and reductions achieved.</p> <p>This should be a CORE indicator for the sector.</p>
Emissions, effluents and waste	<p>Commentary on EN20 O_x, SO_x, and other significant air emissions by type and weight.</p> <p>Report emissions per MWh net generation.</p> <p>Examples of 'other significant air emissions' include mercury, coal pile dust, ash lagoons or ponds, precipitator dust, and reservoir draw down dust.</p>
Emissions, effluents and waste	<p>Commentary EN21 Total water discharge by quality and destination.</p> <p>Include thermal discharges.</p>

Emissions, effluents and waste	<p>Commentary EN22 Total weight of waste by type and disposal method.</p> <p>Include PCB waste.</p> <p>Report on nuclear waste using IAEA definitions and protocols.</p> <p>Report volume of spent nuclear fuel sent for processing and reprocessing per year. In addition, report radioactive waste produced per net MWh nuclear generation per year.</p> <p>Radioactive nuclear waste intensity should be measured both in terms of mass and activity. Report (in terms of volume) low/intermediate level waste and high level waste separately, based on IAEA radioactive waste classification. This should also include waste produced from reprocessing activities, where data is available.</p>
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Social Section

Labor Practices and Decent Work

Electric Utility Sector-Specific Labor Practices and Decent Work Disclosures on Management Approach

Aspect	Disclosures
Employment	EU15. Processes to ensure the availability of a skilled workforce.
Employment	EUxx. Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors.

Electric Utilities Sector-Specific Labor Performance Indicators and Commentary on G3 Indicators

Aspect	Indicator and Commentary
Employment	<p>Commentary on LA1 Total workforce by employment type, employment contract, and region.</p> <p>Report on total contractor workforce by employment type, employment contract and region.</p>
Employment	EU16. Contractor and subcontractor employees involved in construction, operation & maintenance activities.
Employment	EU17. Contractor and subcontractor employees that have undergone relevant health and safety training
Labor/Management	<p>Commentary on LA4 Percentage of employees covered by collective bargaining agreements.</p>

Relations	Report on percentage of contractor employees working for the reporting organization covered by collective bargaining agreements.
Occupational Health and Safety	<p>Commentary on LA7 Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region.</p> <p>Report on health and safety performance of contractors and subcontractors working onsite or on behalf of the reporting organization off site.</p>

Human Rights

Electric Utilities Sector-Specific Commentary on G3 Human Rights Indicator

Aspect	Commentary
Freedom of Association and Collective Bargaining	<p>Commentary on HR5 Operations identified in which the right to exercise freedom of association or collective bargaining may be at significant risk, and actions taken to support these rights.</p> <p>Report on management mechanisms to address the right to strike or instances of lock out, given the context of the industry's need to ensure continuous provision of services. Where the right to strike does not exist, report on remedial measures such as binding arbitration.</p>

Society

Electric Utility Sector-Specific Society Disclosures on Management Approach

Aspect	Disclosures
Community	EU18. Stakeholder participation in the decision making process related to energy planning and infrastructure development
Community	EU19. Approach to managing the impacts of displacement
Disaster/Emergency Planning and Response	EU20. Contingency planning measures, disaster/emergency management plan and training programs, and recovery/restoration plans.

Electric Utilities Sector-Specific Society Performance Indicator and Commentary on G3 Indicator

Aspect	Indicator and Commentary
Community	<p>Commentary on SO1 Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.</p>

	<p>Include discussions of programs related to:</p> <ul style="list-style-type: none"> • Ways in which information is exchanged and local population is involved, prior, during and after the event and the provision for intervener funding for the local population. • Influx of workers and impacts on neighboring communities (including changes to local social structures and culture); • Changes to land-use including loss of global commons (e.g. access to land, natural resources, and heritage); • Impacts on infrastructure (e.g. roads, housing), and access to services (e.g. education, utilities, healthcare); and • Changes to the aesthetics and quality of the landscape.
Community	<p>EU21. Number of people displaced by new or expansion projects related to generation facilities and transmission lines, broken down by physical and/or economic displacement.</p>

Product Responsibility

Electric Utility Sector-Specific Product Responsibility Disclosure on Management Approach

Aspect	Disclosure
Access	EU22. Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services.
Provision of Information	EU23. Practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services.

Electric Utilities Sector-Specific Product Responsibility Performance Indicators and Commentary on G3 Indicators

Aspect	Indicator and Commentary
Public Health and Safety	<p>Commentary on PR1 Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.</p> <p>State the processes for assessing community health risks including monitoring, prevention measures and, if applicable, long term health-related studies).</p> <p>Identify community health risks that are assessed. Include compliance with exposure limit(s) to electric fields (in kV per m) and magnetic fields (in μT) (where available) for members of the public and employees in the areas in which reporting organization operates.</p>
Public Health and Safety	EU24. Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases.
Access	EU25. Percentage of population unserved in licensed distribution areas.
Access	EU26. Number of residential disconnections for non-payment, broken down by duration of disconnection.
Access	EU27. Power outage frequency.
Access	EU28. Average power outage duration.
Access	EU29. Average plant availability factor by energy source and by regulatory regime

Profile

Electric Utility Sector-Specific Organizational Profile

In addition to the disclosure items in the Organizational Profile found in the G3 Guidelines, electric utilities should also provide the following information specific to the sector.

EU1: Installed capacity, broken down by energy source and by regulatory regime

1. Relevance

The installed capacity of the reporting organization provides information on the scale and impact of the organization's operations. The installed capacity, broken down by energy source and by regulatory regime, shows in more detail the reporting organization's operations

This provides a consistent framework for measuring and reporting for utilities operating in more than one regulatory regime.

2. Compilation

2.1 Describe the fuels used and the output for multi-fuel plants.

2.1 For combined heat and power plants, the reporting organization should report nominal electricity capacity

2.3 Report installed capacity of the utility. This should be broken down by the total installed capacity, installed capacity by energy source and installed capacity by regulatory regime.

2.5. Report installed capacity in MW.

3. Definitions

Regulatory Regime

A regulatory regime is defined as a local, sub-national, national or regional area where there is a common regulatory framework.

Energy Sources

Energy sources include: natural gas, oil, coal, nuclear fission, hydro, biomass, biogas, geothermal, wind, solar, tidal, and wave power.

EU2: Number of residential, industrial, institutional and commercial customer accounts.

1. Relevance

The number of residential, industrial, institutional and customer accounts gives an overall view on the scale of business generated by the reporting organisation. This information provides information on the growth patterns of the company over time.

2. Compilation

2.1 The reporting company should clearly define the types of account they are reporting (This should include any additional account types not listed in the table).

2.2 Report the total number of accounts by type and by point of connection (e.g. transmission, or distribution). A customer account may include more than one connection. Types of account include residential, industrial, commercial, and institutional. The reporting organization may wish to report this information in a table similar to the one below

Number of accounts by type and point of connection	Point of connection	
	Transmission	Distribution
Type of account		
Residential		
Industrial		
Commercial		
Institutional		

2.3 Report for each type of account, the number of independent power producers (IPP) and customers who are also producers (i.e. customers who use distributed generation)

3. Definitions

Customer accounts

Customer accounts refer to number of connections to the grid.

4. Documentation

Information sources include billing department, finance department or the annual report.

5. References

None.

EU3: Length of transmission and distribution lines by voltage.

1. Relevance

The length of transmission and distribution lines shows the extent of the reporting organisation's energy transmission and distribution infrastructure. It also gives an impression on the overall scale of the utility. Annual figures enable assessments to be made on the growth or decline of the infrastructure in place.

2. Compilation

2.1 Report the range of voltage levels used to categorise transmission and distribution lines

2.2 Report aggregated circuit lengths of transmission and distribution lines in both categories. Circuit length should be reported in km and by regulatory regime. Circuit length is the length of one circuit consisting of 3 cables between two rail systems. Usually electricity is transported and distributed as 3 phase high voltage AC. One circuit consists of three cables each bearing one phase. As the three cables form a physical entity, circuit length is defined as the length of one entity between two rail systems. i. e. in case where there are two circuits of 2 km on the same track this means $2 \times 2 \text{ km} = 4 \text{ km}$. In the case of High Voltage DC the same definition applies independently of a single line or bipolar layout of the transmission line.

3. Definitions

Circuit length

Length of every circuit measured between two (electric) rail systems. Measured in kilometers.

Transmission Lines

Transmission lines transfer electrical power from power stations to substations.

Distribution Lines

Distribution lines transfer electrical power from substations to customers.

4. Documentation

None.

5. References

None.

EU4: Allocation of CO₂e emissions certificates, broken down by regulatory regime.**1. Relevance**

There are numerous national and international regulations and incentive systems (such as trading and carbon certificates) designed to control the volume and reward the reduction of CO₂ equivalents. By monitoring and setting reduction targets, emissions can be reduced effectively (e.g., by carefully selecting energy-efficient materials, services, or production capabilities). Permits or certificates can be auctioned or allocated for free, impacting the cost burden to utilities. Reporting on the allocation of CO₂e emission permits or certificates for a utility, illustrates the exposure the organization has to current or future national and international climate change policies. It also provides an illustration of the strategy used by the organization to manage CO₂e emissions (e.g. buying credits from companies that do not use their full allocation of CO₂e emissions, or selling to those that have exceeded their allocation).

This indicator is only relevant to those organisations operating in markets with either voluntary or legally-binding CO₂e trading schemes

2. Compilation

2.1 Report qualitatively how the reporting organization is covered by emissions trading schemes or alternative requirements for managing CO₂e emissions.

2.2 Report quantitatively potential CO₂e emission allocations or the emission reduction targets that are likely to be required of the reporting organization. If CO₂e emission permits have been allocated by assignment, by a public sector body, they should be reported by regulatory regime

2.3 The reporting organization should provide percentage of permits allocated for free and auctioned.

3. Definitions***Regulatory Regime***

Regulatory regime refers to local, sub-national, national or regional area where there is a common regulatory framework.

Auctioning

In an emissions trading scheme, auctioning is an allocation method by which CO₂e certificates are sold to the participants to the highest bidders, as opposed to allocating them for free. Contrary to free allocation, auctioning complies with the “polluter pays principle” and avoids giving windfall profits to the companies that have passed on the cost of CO₂e certificates to their customers, despite receiving them for free.

6. Documentation

None.

7. References

None.

Economic Section

Electric Utility Sector-Specific Economic Disclosures on Management Approach

EU5: Management to ensure short and long-term electricity availability and reliability.

1. Relevance

This provides information on the reporting organization's plans and processes to ensure reliability, delivering sufficient capacity to the market and ensuring the grid capacity to transport or distribute to the customer.

This indicator is closely linked to EU9 which describes the planned capacity (in MW) against projected electricity demand.

2. Compilation

2.1 Report short-term operational approaches including:

- Maintenance practices; and
- Peak load management, such as load shedding to ensure electricity supply.

2.2 Report planning approaches to address:

- Availability;
- Reliability of supply of electricity;
- Cost;
- Maintenance; and
- Asset life.

These approaches can include scenario planning or alternatives analysis (e.g. Integrated Resource Planning), to evaluate different sites, technologies and social, environmental, regulatory and economic implications.

3. Definitions

None.

4. Documentation

Resource planning department, operations and distribution services and public records/information

5. References

None.

EU6: Demand-side management programs including residential, commercial, institutional and industrial programs.

1. Relevance

In the past, the primary objective of most demand-side management (DSM) programs was to provide cost-effective energy and capacity resources to help defer the need for new sources of power, including generating facilities, power purchases, and transmission and distribution capacity additions. However, due to changes that are occurring within the industry, electric utilities are also using DSM as a way to enhance customer service.

2. Compilation

Programs will involve different forms of interaction between the utility and the customer. For example, the interaction could be based on provision of advisory services, energy-saving equipment, tariff incentives or it could be based on the customer receiving information such as educational brochures.

2.1 Describe demand side management initiatives in terms of:

- Investments;
- Program objectives;
- Methodology used to monitor and evaluate programs; and
- Results identified including MWh saved or MW load shifted and underlying assumptions.

2.2 Report separately on programs and define any subcategories for:

- Residential;
- Commercial;
- Institutional; (e.g. government, health, non-profits) and
- Industrial customers.

3. Definitions

Demand-Side Management

The planning, implementation and monitoring of utility activities designed to encourage customers to modify patterns of electricity usage. This includes the timing and level of electricity demand. It refers to any energy and load-shape modifying activities in response to utility-administered programs. It does not refer to energy and load-shaped changes arising from the normal operation of the marketplace or from government-mandated energy efficiency standards. DSM covers the complete range of load-shaped objectives, including strategic conservation and load management, as well as strategic load growth.

5. Documentation

This information may come from regulatory filings by regulatory regime and project information.

5. References

None.



EU7: Research and development activity aimed at providing reliable and affordable electricity and promoting sustainable development.

1. Relevance

Research and development into providing reliable and affordable electricity is an important part of today's energy landscape. With the cost of producing energy from non-renewable sources increasing, it is important that energy utilities find new, more sustainable ways of providing energy. This indicator describes how the reporting organization is using research and development to provide affordable electricity and promote sustainable development.

2. Compilation

2.1 Report Research and Development (R&D) activities in areas of direct expenditures and research collaboration. Provide a breakdown of R&D expenditure, drawing particular attention to categories relating to sustainable development. These categories might include:

- Energy efficiency;
- Renewable energy technologies;
- Distributed energy; and
- Advanced generation and other innovative technologies.

2.2 Report how these research and development activities are related to disclosures under EU5 and indicators associated with access to electricity.

3. Definitions

Research and Development

Research and Development is work directed towards innovation to improve technical capability in the future.

4. Documentation

Potential information sources include R&D department, financial department, and embedded R&D functions within business units

5. References

None.

EU8: Provisions for decommissioning of nuclear power sites.**1. Relevance**

With new nuclear power sites coming on line and old sites being decommissioned it is essential that those energy utilities concerned have provisions in place for the safe decommissioning of their sites. This indicator provides information on the reporting organization's means for decommissioning nuclear power sites. It ensures that the reporting organization has plans in place for the decommissioning of its sites and that they are carried out in a safe and secure manner that complies with international regulations. EU8 applies to electric utilities with nuclear assets.

2. Compilation

2.1 Report provisions, including estimated cost for closure and decommissioning of plants, and for site decontamination and restoration.

2.2 Report the discount rate used to report the provisions to give context to the estimated costs.

2.3 Report the schedule of activities and progress.

3. Definitions***Decommissioning of nuclear power sites***

Decommissioning involves a clean-up of all radioactive and any other harmful material and a progressive demolition of the plant.

4. Documentation

The financial statements will include details of costs, including the discount rates used.

5. References

- IAEA Safety Glossary, 2007 Edition
http://www-pub.iaea.org/MTCD/publications/PDF/Pub1290_web.pdf provides examples of provisions.

Electric Utility Sector-Specific Economic Performance Indicators

EU9: Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime.

1. Relevance

This indicator provides information on the utility's planned electricity capacity and its projected future energy requirements. It aims to show whether the reporting organization is planning to generate enough energy capacity to meet future increased demand. There are utilities in certain markets which are not involved in planning and therefore are not expected to report on this indicator.

This indicator is closely linked to EU5 which describes the planning processes in place to ensure availability and reliability of supply.

2. Compilation

2.1 Report planned capacity in MW, including purchased power and reserve margins, for each regulatory regime broken down by both energy source and by:

- Capacity under construction
- Planned future investments including commitments made by the utility

This should factor in, for example, new plants, retrofitting, upgrading, mothballing, decommissioning or efficiency improvements and energy storage. It should describe changes to net capacity.

2.2 Report the comparison of planned capacity against projected demand over the same time period.

2.3 Report an assessment of the dependability of these projections and/or any constraints, for example, the intermittency of wind generation. Information should be reported by regulatory regime (by region, state or country)

3. Definitions

Regulatory Regime

Regulatory regime refers to local, sub-national, national or regional area where there is a common regulatory framework.

Energy Sources

Energy sources include natural gas, oil, coal, nuclear fission, hydro, biomass, biogas, geothermal, wind, solar, tidal, wave power among others.

Capacity

Capacity is the maximum amount of power, in MW, that an entity can produce. Utilities are asked to report net capacity, i. e. maximum capacity a power station is designed to deliver to the grid. Internal use of electricity for auxiliary systems is excluded.



4. Documentation

None.

5. References

None.

EU12: Average generation efficiency of thermal plants by energy source and by regulatory regime.

1. Relevance

Improved operational efficiency contributes towards sustainable development through cost reduction and emissions reduction. It can also influence national energy security. Improvements in generation efficiency reduce the volumes of oil/gas and other fuel required for electricity generation and reduces emissions.

2. Compilation

2.1 Indicate assumptions and confidence level of the figures reported for this indicator.

2.2 Report the average efficiency of the fleet by energy source and by regulatory regime. Report the efficiency as a percentage (electricity sent-out/energy input)

2.2 Report overall efficiency (electricity sent-out + heat supplied/ energy input), in addition to electricity efficiency, if operating a combined heat and power plant.

3. Definitions

Generation efficiency

Generation efficiency is the ratio of gross energy going into a plant against the net energy (electricity, and if CHP, heat) supplied.

Energy Sources

Energy sources include: Natural gas, oil, coal, nuclear fission, hydro, biomass, biogas, geothermal, wind, solar, tidal, wave power, among others.

Regulatory regime

Regulatory regime refers to local, sub-national, national or regional area where there is a common regulatory framework.

4. Documentation

Plant manuals, engineering and operational reports.

5. References

None.

EU13: Transmission and distribution losses.**1. Relevance**

Information on transmission and distribution efficiency captures information on technical and non-technical losses (including unauthorized connections). Losses can increase costs to consumers, increase emissions intensity and provide an indication that there are illegal connections. Illegal connections can be linked to public health and safety. Year-on-year reporting will enable companies and their stakeholders to see variation in losses and identify where improvements can be made.

2. Compilation

2.1 For distribution efficiency differentiate between technical and non-technical losses. It is understood that it is difficult to assess the magnitude of these losses. Therefore organizations should describe key assumptions of the estimates.

2.2 Report transmission and distribution losses separately. Losses are measured as a percentage of energy lost /energy entering the system over a one year period.

3. Definitions***Transmission***

Transmission is the process of transferring electrical power from power stations to substations.

Distribution

Distribution is the process of transferring electrical power from substations to customers.

4. Documentation

None.

5. References

None.

Environmental Section

Electric Utilities Sector Specific Commentary on G3 Environmental Disclosures on Management Approach

Provide a concise disclosure on the Management Approach items outlines below with reference to the following environmental aspects:

- Materials;

Long-term strategy for managing and phasing out high level and low level in-service PCBs.

Compilation:

Identify high level and low level as defined by the reporting organization according to prevailing national or regional standards. Use >500 ppm as the high level threshold in the absence of such standards. Reporting threshold for low level should be according to the prevailing national/regional standards or, if no standards exist, between 50 and 500 ppm.

- Energy;
- Water;

At the watershed level, include collaborative approaches to managing watersheds and reservoirs for multiple uses (e.g., irrigation, drinking water, ecosystem conservation, etc.). Also report long-term planning for securing water resources, for meeting the needs of both the utility and other stakeholders (e.g. local communities). This includes describing the criteria for managing maximum/minimum flow of surface water and volume of ground water are determined and maintained.

- Biodiversity;

Report approaches for pest and vegetation management along transmission and distribution corridors (e.g., use of Integrated Pest Management and Integrated Vegetation Management).

- Emissions, Effluents, and Waste;

Management strategy and storage methods for different types of radioactive nuclear waste, including:

- Temporary and permanent storage;
- Environmental, health and safety impacts of radioactive nuclear waste; and
- Security measures according to the applicable management standards/legislative framework.

Compilation:

Radioactive nuclear waste includes Low Level Radioactive Waste, Intermediate Level Radioactive Waste and High Level Radioactive Waste. Include mixed waste (radioactive and hazardous). Use IAEA definitions (BCH).

- Products and Services;
- Compliance;
- Transport; and
- Overall.



Goals and Performance

Organization-wide goals regarding performance relevant to the Environmental Aspects.

Use organization-specific Indicators (as needed) in addition to the GRI Performance Indicators to demonstrate the results of performance against goals.

Policy

Brief, organization-wide policy (or policies) that define the organization's overall commitment related to the Environmental Aspects or state where this can be found in the public domain (e.g., web link).

Organizational responsibility

The most senior position with operational responsibility for Environmental Aspects or explain how operational responsibility is divided at the senior level for these Aspects. This differs from Disclosure 4.1, which focuses on structures at the governance level.

Training and awareness

Procedures related to training and raising awareness in relation to the Environmental Aspects.

Monitoring and Follow-Up

Procedures related to monitoring and corrective and preventive actions, including those related to the supply chain.

List of certifications for environment-related performance or certification systems, or other approaches to auditing/verification for the reporting organization or its supply chain.

Additional Contextual Information

Additional relevant information required to understand organizational performance, such as:

- Key successes and shortcomings;
- Major organizational environmental risks and opportunities related to issues;
- Major changes in the reporting period to systems or structures to improve performance; and
- Key strategies and procedures for implementing policies or achieving goals.

Electric Utility Sector-Specific Environmental Performance Indicators and Commentaries on G3 Indicators

EN1: Materials used by weight or volume.

1. Relevance

This Indicator describes the reporting organization's contribution to the conservation of the global resource base and efforts to reduce the material intensity and increase the efficiency of the economy. These are expressed goals of the OECD Council and various national sustainability strategies. For internal managers and others interested in the financial state of the organization, material consumption relates directly to overall costs of operation. Tracking this consumption internally, either by product or product category, facilitates the monitoring of material efficiency and cost of material flows.

2. Compilation

2.1 Identify total materials used, including materials purchased from external suppliers and those obtained from internal sources (captive production and extraction activities). This can include:

- Raw materials (i.e., natural resources used for conversion to products or services such as ores, minerals, wood, etc.);
- Associated process materials (i.e., materials that are needed for the manufacturing process but are not part of the final product, such as lubricants for manufacturing machinery);
- Semi-manufactured goods or parts, including all forms of materials and components other than raw materials that are part of the final product; and
- Materials for packaging purposes.

2.2 Identify non-renewable and direct materials used. Convert any measurements into estimated weight or volume, calculated 'as is' rather than by 'dry substance/weight'.

2.3 Report the total weight or volume of :

- Non-renewable materials used; and
- Direct materials used.
- [Report in-use inventory of solid and liquid high level and low level PCBs contained in equipment.](#)

3. Definitions

Direct materials

Materials that are present in a final product.

Non-renewable materials

Resources that do not renew in short time periods, such as minerals, metals, oil, gas, coal, etc.

4. Documentation

Potential information sources include billing and accounting systems, and the procurement or supply management department.



5. References

- OECD, Recommendation of the Council on Material Flows and Resource Productivity, 2004.

EN8: Total water withdrawal by source.**1. Relevance**

Reporting the total volume of water withdrawn by source contributes to an understanding of the overall scale of potential impacts and risks associated with the reporting organization's water use. The total volume withdrawn provides an indication of the organization's relative size and importance as a user of water, and provides a baseline figure for other calculations relating to efficiency and use.

The systematic effort to monitor and improve the efficient use of water in the reporting organization is directly linked to water consumption costs. Total water use can also indicate the level of risk posed by disruptions to water supplies or increases in the cost of water. Clean freshwater is becoming increasingly scarce, and can impact production processes that rely on large volumes of water. In regions where water sources are highly restricted, the organization's water consumption patterns can also influence relations with other stakeholders.

2. Compilation

2.1 Identify the total volume of water withdrawn from any water source that was either withdrawn directly by the reporting organization or through intermediaries such as water utilities. This includes the abstraction of cooling water.

2.2 Report overall water usage for processing, cooling and consumption in thermal and nuclear power plants, including use of water in ash handling.

2.3 Report the total volume of water withdrawn in cubic meters per year (m³/year) by the following sources:

- Surface water, including water from wetlands, rivers, lakes, and oceans;
- Ground water;
- Rainwater collected directly and stored by the reporting organization;
- Waste water from another organization; and
- Municipal water supplies or other water utilities.

3. Definitions***Total water withdrawal***

The sum of all water drawn into the boundaries of the reporting organization from all sources (including surface water, ground water, rainwater, and municipal water supply) for any use over the course of the reporting period.

4. Documentation

Information on organizational water withdrawal can be drawn from water meters, water bills, calculations derived from other available water data or (if neither water meters nor bills or reference data exist) the organization's own estimates.

5. References

None.

EN12: Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.

1. Relevance

This Indicator provides information on the significant direct and indirect impacts of the reporting organization on biodiversity in protected areas and areas of high biodiversity value outside protected areas. It also provides the background for understanding (and developing) an organizational strategy to mitigate these impacts. By asking for structured, qualitative information, the Indicator enables comparison across organizations and over time of the relative size, scale, and nature of impacts.

2. Compilation

2.1 Identify significant impacts on biodiversity associated with activities, products, and services of the reporting organization, including both direct impacts as well as indirect impacts (e.g., in the supply chain).

2.2 Report the nature of significant direct and indirect impacts on biodiversity with reference to one or more of the following:

- Construction or use of manufacturing plants, mines, and transport infrastructure;
- Pollution (introduction of substances that do not naturally occur in the habitat from point and non-point sources);
- Introduction of invasive species, pests, and pathogens;
- Reduction of species;
- Habitat conversion; and
- Changes in ecological processes outside the natural range of variation (e.g., salinity or changes in groundwater level).
- [Impacts of thermal discharge.](#)

2.3 Report significant direct and indirect positive and negative impacts with reference to the following:

- Species affected;
- Extent of areas impacted (this may not be limited to areas that are formally protected and should include consideration of impacts on buffer zones as well as formally designated areas of special importance or sensitivity);
- Duration of impacts; and
- Reversibility or irreversibility of the impacts.

3. Definitions

Significant impact

Impacts that may adversely affect the integrity of a geographical area/region, either directly or indirectly. This occurs by substantially changing its ecological features, structures, and functions across its whole area and over the long term. This means that the habitat, its population level, and/or the particular species that make that habitat important cannot be sustained.

On a species level, a significant impact causes a population decline and/or change in distribution so that natural recruitment (reproduction or immigration from unaffected areas) cannot return to



former levels within a limited number of generations. A significant impact can also affect subsistence or commercial resource use to the degree that the well-being of users is affected over the long term.

Thermal Discharges

Waste heat from power plant operations released into the environment. This usually refers to water that is pumped from a nearby body for use as condenser cooling water, where it picks up heat and then is discharged back into the water body. The heated water thus adds thermal energy to the water body, which may have an effect on the local ecosystems.

4. Documentation

Information for this Indicator can be found in the reporting organization's environmental management system or other internal documentation. If available, information can also be obtained from environmental and social impact assessments and/or lifecycle assessments, and from other organizations upstream/downstream in the supply chain.

5. References

- GRI Biodiversity Resource Document.

EU14: Biodiversity of offset habitats compared to the biodiversity of the affected areas.

1. Relevance

The presence of electricity utility infrastructure can result in impacts on biodiversity which may not be readily mitigated. Wildlife habitats can be adversely affected when utility infrastructure (e.g. power plants, wind farms, transmission lines, dams) are installed. One solution to this impact is the concept of offset habitats. This indicator describes the extent to which the biodiversity in offset habitats compares with the original habitat. Offsets are being commonly employed and standards are currently being developed. This indicator is particularly relevant to organizations that have activities in sensitive natural habitats. Additional measures related to biodiversity conservation are captured in G3, EN11 -15.

2. Compilation

This indicator compares offset habitats with original habitats, described by EN12 identified for offsetting.

2.1. Describe biodiversity of offset habitat in terms of:

- Area (km²) of habitats;
- Major species conserved / protected; and
- Habitat description (e.g. wetland, grassland, forest, etc).

2.2. Compare biodiversity of original habitat before company activities take place, with the biodiversity of the offset habitat using information collected in EN12.

2.3. Discuss the reason for the differences between the original and offset habitats and describe any work being done to improve the biodiversity of the offset habitat.

2.4 Report the period for monitoring and reporting biodiversity at offset sites.

3. Definitions

Biodiversity

Number and variety of living organisms includes genetic diversity, species diversity, and ecological diversity. Biodiversity can be seen as a “number”, but for practical reasons, it cannot be defined as a number. In reality notion of biodiversity should be linked to the notion of species at risk or endangered species.

Offset Habitat

An offset habitat is an area specifically designated to replace land where biodiversity has been adversely affected by the presence of utility activities.

4. Documentation

Environmental management plans in Environmental Impact Assessment relating to construction and operation of plant, Voluntary action plans related to biodiversity conservation, and Regulatory guidelines.

5. References

- EN 11, EN12, EN15
- IUCN Red List of Threatened Species

EN14: Strategies, current actions, and future plans for managing impacts on biodiversity.**1. Relevance**

Performance against biodiversity policies, objectives, and commitments depends on having structured programs in place for managing impacts. The presence and structure of programs is particularly important when national regulations do not provide clear reference points for an organization planning its biodiversity management.

This Indicator enables both internal and external stakeholders to analyze how well the reporting organization's strategies, current actions, and future plans address potential impacts on biodiversity. The quality of the organization's approach to managing impacts on biodiversity (as identified in EN11 and EN12) will affect its exposure to risks such as reputational damage, fines, or rejection of planning or operating permissions. Actions to protect or restore habitats and species are of particular relevance.

2. Compilation

2.1 If national regulations have influenced the specific strategies, actions, or plans reported under this Indicator, this should be noted.

2.2 Report the organization's strategy for achieving its policy on biodiversity management including:

- Integration of biodiversity considerations in analytical tools such as environmental site impact assessments;
- Methodology for establishing risk exposure to biodiversity;
- Setting specific targets and objectives;
- Monitoring processes; and
- Public reporting.

2.3 Report actions underway to manage biodiversity risks identified in EN11 and EN12, or plans to undertake such activities in the future.

2.4 Report the impacts and mitigation measures of new sites and existing sites to the following:

- Forested areas (e.g., alterations to tree crown density); loss of indigenous species);
- Landscape (e.g., impacts of wind farms, transmission lines); and
- Freshwater and wetland ecosystems (e.g., downstream water quality including turbidity, sedimentation, siltation and water quality of reservoir and other water bodies).

Assessment and mitigation should consider conservation plans for indigenous species, alterations in the migration, breeding, or habitat of animals (e.g., fish passage) from the reporting organization's infrastructure (e.g., power lines and dams).

3. Definitions

None.



4. Documentation

Information on programs and targets can be found in management guidelines or obtained from the organization's Environmental Management System, Environmental and Social Impact Assessments, Corporate Social Responsibility policies, or Risk Registers.

5. References

None.

EN16: Total direct and indirect greenhouse gas emissions by weight.**1. Relevance**

Greenhouse gas emissions are the main cause of climate change and are governed by the United Nations Framework Convention on Climate Change (UNFCCC) and the subsequent Kyoto Protocol. As a result, different national and international regulations and incentive systems (such as trading climate certificates) aim to control the volume and reward the reduction of greenhouse gas emissions.

This Indicator can be used in combination with EN17 to explain targets for regulations or trading systems at international or national levels. The combination of direct and indirect emissions also provides insights into the potential cost implications of taxation or trading systems for reporting organizations.

2. Compilation

2.1 Different conversion methodologies are available to calculate the amount of greenhouse gas emissions per source. Indicate the standard used, and indicate the methodology associated with the data with reference to the following categories:

- Direct measurement (e.g., continuous online analyzers, etc.);
- Calculation based on site specific data (e.g., for fuel composition analysis, etc.);
- Calculation based on default data; and
- Estimations. If estimations are used due to a lack of default figures, indicate which basis figures were obtained.

Further details on the compilation of this Indicator are available in the WRI /WBCSD GHG Protocol and in the IPCC document as listed under references.

2.2 Identify direct emissions of greenhouse gases from all sources owned or controlled by the reporting organization, including:

- Generation of electricity, heat, or steam (as reported in EN3);
- Other combustion processes such as flaring;
- Physical or chemical processing;
- Transportation of materials, products, and waste;
- Venting; and
- Fugitive emissions.

Emissions from combustion processes and sources will correspond to the direct primary energy from non-renewable and renewable sources as reported in EN3. Note that the direct CO₂ emissions from the combustion of biomass shall not be included but reported separately under GHG Protocol Corporate Standard (revised edition).

2.3 Identify indirect emissions of greenhouse gases resulting from the generation of purchased electricity, heat, or steam (this corresponds with energy consumption reported under EN4).

Other indirect emissions (e.g., from organizational travel) are not included since they are accounted for in EN17.



2.4 Report total greenhouse gas emissions as the sum of direct and indirect emissions (as identified in 2.2 and 2.3) in tonnes of CO₂ equivalent.

2.5 Report CO₂e per MWh, broken down by regulatory regime, for:

- Net generation from all generating capacity;
- Net generation from all fossil fuel generation; and
- Estimated net delivery to end users. This includes emissions from own generation as well as gross purchased power including line losses.

Explanation:

The first bullet refers to the emissions intensity for all generating capacity, and the second bullet refers to that of the fossil generation capacity.

A breakdown by regulatory regime is necessary because of the different CO₂e allocation schemes in place.

3. Definitions

Direct emissions

Emissions from sources that are owned or controlled by the reporting organization. For example, direct emissions related to combustion would arise from burning fuel for energy within the reporting organization's operational boundaries.

Indirect emissions

Emissions that result from the activities of the reporting organization but are generated at sources owned or controlled by another organization. In the context of this Indicator, indirect emissions refer to greenhouse gas emissions from the generation of electricity, heat, or steam that is imported and consumed by the reporting organization.

Carbon dioxide equivalent

CO₂ (Carbon Dioxide) equivalent is the measure used to compare the emissions from various greenhouse gases based on their global warming potential (GWP). The CO₂ equivalent for a gas is derived by multiplying the tonnes of the gas by the associated GWP.

Regulatory regime

Regulatory regime refers to local, sub-national, national or regional area where there is a common regulatory framework.

Net

Net refers to electricity output to the grid from the power plant.

4. Documentation

Emissions resulting from direct and indirect energy use can be calculated from the data reported in EN3 and EN4.



5. References

- The Greenhouse Gas Protocol (GHG) Initiative – A corporate accounting and reporting standard (Revised Edition, 2004) of the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).
- Kyoto Protocol, 1997.
- Intergovernmental Panel on Climate Change (IPCC), Climate Change 2001, Working Group I: The Scientific Basis.



EN18: Initiatives to reduce greenhouse gas emissions and reductions achieved.

This should be a CORE indicator for the sector.

1. Relevance

Greenhouse gas emissions are the main cause of climate change and are governed by the United Nations agreed on the Framework Convention on Climate Change (UNFCCC) and the subsequent Kyoto Protocol. As a result, different national and international regulations and incentive systems (such as trading climate certificates) aim to control the volume and reward the reduction of greenhouse gas emissions. When monitored comprehensively, emissions can be reduced effectively (e.g., by carefully selecting energy-efficient materials, services, or production capacities).

This Indicator can be used in combination with EN16 and EN17 to set and monitor reduction targets with reference to regulations or trading systems at international or national levels.

Tracking and reducing greenhouse gas emissions can improve the overall life cycle performance of products and services, and serve as part of a comprehensive design-for-environment program.

2. Compilation

- 2.1 Identify emissions reductions from all sources owned or controlled by the reporting organization as reported under EN16 and resulting from indirect energy use and activities of the reporting organization as reported under EN17. Distinguish between mandatory and voluntary emissions reductions.
- 2.2 Report initiatives to reduce greenhouse gas emissions, include the areas where the initiatives were implemented.
- 2.3 Report quantitatively the extent greenhouse gas emissions reductions achieved during the reporting period as a direct result of the initiative(s) in tonnes of CO₂ equivalent.

3. Definitions

None.

4. Documentation

Information can be drawn from data reported under EN16 and EN17, from emissions measurements, calculated from accounting data and defaults, or from estimates. Information on initiatives can likely be found in records maintained by departments responsible for environmental management.

5. References

- The Greenhouse Gas Protocol (GHG) Initiative – A corporate accounting and reporting standard (Revised Edition, 2004) of the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).
- Kyoto Protocol, 1997.



- Intergovernmental Panel on Climate Change (IPCC), Climate Change 2001, Working Group I: The Scientific Basis.

EN20: O_x, SO_x, and other significant air emissions by type and weight.

1. Relevance

This Indicator measures the scale of the organization's air emissions and can demonstrate the relative size and importance of these emissions compared to other organizations.

Air pollutants have adverse effects on habitats and human and animal health. Deterioration of air quality, acidification, forest degradation, as well as public health concerns has led to local and international regulations to control air emissions. Reductions in regulated pollutants lead to improved health conditions for workers and neighboring communities. Reductions or demonstrated performance beyond compliance can enhance relations with affected communities and workers, and the ability to maintain or expand operations. In regions with emission caps, the volume of emissions also has direct cost implications for the organization.

2. Compilation

2.1 Identify significant air emissions and calculate their weight.

2.3 Since calculating certain air emissions such as NO_x requires complex quantification efforts, indicate the methodology used for calculations, selecting one of the following approaches:

- Direct measurement of emissions (e.g., online analyzers, etc.);
- Calculation based on site specific data;
- Calculation based on default data; or
- Estimation (if estimations are used due to a lack of default figures, indicate on what basis figures were obtained).

2.3 Report the weight of significant air emissions (in kilograms or multiples such as tonnes) for each of the following categories:

- NO_x;
- SO_x;
- Persistent organic pollutants (POP);
- Volatile organic compounds (VOC);
- Hazardous air pollutants (HAP);
- Stack and fugitive emissions;
- Particulate matter (PM); or
- Other standard categories of air emissions identified in regulations.

2.4 Report emissions per MWh net generation.

Examples of "other significant air emissions" include mercury, coal pile dust, ash lagoons or ponds, precipitator dust, and reservoir draw down dust.

3. Definitions

Significant air emissions

Air emissions that are regulated under international conventions and/or national laws or regulations, including those listed on environmental permits for the reporting organization's operations.

4. Documentation

Information can be drawn from emissions measurements, calculated from accounting data and defaults, or estimated.

5. References

- Geneva Protocol to the Convention on Long-Range Transboundary Air Pollution, 1979.
- Helsinki Protocol to the Convention on Long-Range Transboundary Air Pollution, 1985.
- Rotterdam Convention on the Prior Informed Consent (PIC) Procedure, 1998.
- Stockholm Convention on Persistent Organic Pollutants (POPs) (Annex A, B, and C), 2001.
- Sofia Protocol to the Convention on Long-Range Transboundary Air Pollution, 1988.
- Gothenburg Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution to abate acidification, eutrophication, and ground-level ozone.

EN21. Total water discharge by quality and destination.

1. Relevance

The amount and quality of the water discharged by the reporting organization is directly linked to ecological impact and operational costs. By progressively improving the quality of discharged water and/or reducing volumes, the reporting organization has the potential to reduce its impact on the surrounding environment. Unmanaged discharge of effluents with a high chemical or nutrient load (principally nitrogen, phosphorous, or potassium) can have a significant impact on receiving waters. This, in turn, can affect the quality of the water supply available to the organization and its relationship with communities and other water users.

Discharging effluents or process water to a facility for treatment not only reduces pollution levels, but can also lower the organization's financial costs and the risk of regulatory action for non-compliance with environmental regulation. All of this enhances the reporting organization's social license to operate.

2. Compilation

2.1 Identify planned and unplanned water discharges (including thermal discharges but excluding collected rainwater and domestic sewage) by destination and indicate how it is treated. If the reporting organization does not have a meter to measure water discharges, this figure needs to be estimated by subtracting the approximate volume consumed on-site from the volume withdrawn as reported in EN8.

Clean water refers to water that meets national regulations for freshwater quality when leaving the boundaries of the reporting organization. This can be either freshwater whose quality has not been affected by the organization's use, or wastewater that is treated to meet freshwater standards prior to discharge.

2.2 Report the total volume of planned and unplanned water discharges in cubic meters per year (m^3 /year) by:

- Destination;
- Treatment method; and
- Whether it was reused by another organization.

2.3 Reporting organizations that discharge effluents or process water should report water quality in terms of total volumes of effluent using standard effluent parameters such as Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), etc. The specific choice of quality parameters will vary depending on the organization's products/services/operations. The selection of parameters should be consistent with those used in the organization's sector.

3. Definitions

Total water discharge

The sum of water effluents discharged over the course of the reporting period to subsurface waters, surface waters, sewers that lead to rivers, oceans, lakes, wetlands, treatment facilities, and ground water either through:

- A defined discharge point (point source discharge);
- Over land in a dispersed or undefined manner (non-point source discharge); or



- Wastewater removed from the reporting organization via truck. Discharge of collected rainwater and domestic sewage is not regarded as water discharge.

Thermal Discharges

Waste heat from power plant operations released into the environment. This usually refers to water that is pumped from a nearby body for use as condenser cooling water, where it picks up heat and then is discharged back into the water body. The heated water thus adds thermal energy to the water body, which may have an effect on the local ecosystems.

4. Documentation

Information sources about the volume of water discharged by the reporting organization include flow meters (point-source discharges or when discharges are released through a pipe) and regulatory permits.

5. References

- MARPOL Convention (International Convention for the Prevention of Pollution of Ships), 1973.
- Stockholm Convention on Persistent Organic Pollutants (POPs), 2001.

EN22: Total weight of waste by type and disposal method.**1. Relevance**

Data on waste generation figures over several years can indicate the level of progress the organization has made toward waste reduction efforts. It can also indicate potential improvements in process efficiency and productivity. From a financial perspective, the reduction of waste contributes directly to lower costs for materials, processing, and disposal.

Information about the disposal destination reveals the extent to which a reporting organization has managed the balance between disposal options and uneven environmental impacts. For example, land filling and recycling create very different types of environmental impacts and residual effects. Most waste minimization strategies emphasize prioritizing options for recovery, reuse, or recycling over other disposal options, wherever possible.

2. Compilation

2.1 Identify the amount of waste created by the organization's operations, by:

- Hazardous waste (as defined by national legislation at the point of generation) [including PCB waste](#); and
- Non-hazardous waste (all other forms of solid or liquid waste excluding wastewater).

2.2 [Report on nuclear waste using IAEA definitions and protocols.](#)

2.2 If no weight data are available, estimate the weight using available information on waste density and volume collected, mass balances, or similar information.

2.3 Report the total amount of waste in tones by type as identified in 2.1 for each of the following disposal methods:

- Composting;
- Reuse;
- Recycling;
- Recovery;
- Incineration (or use as fuel);
- Landfill;
- Deep well injection;
- On-site storage; and
- Other (to be specified by the reporting organization).

2.4 [Report volume of spent nuclear fuel sent for processing and reprocessing per year. In addition, report radioactive waste produced per net MWh nuclear generation per year. Radioactive nuclear waste intensity should be measured both in terms of mass and activity.](#)

2.5 [Report \(in terms of volume\) low/intermediate level waste and high level waste separately, based on IAEA radioactive waste classification. This should also include waste produced from reprocessing activities, where data is available.](#)

2.5 Report how the method of disposal has been determined:

- Disposed directly by the reporting organization or otherwise directly confirmed;



- Information provided by the waste disposal contractor; or
- Organizational defaults of the waste disposal contractor.

3. Definitions

Disposal method

The method by which waste is treated or disposed, including composting, reuse, recycling, recovery, incineration, landfill, deep well injection, and on-site storage.

Polychlorinated Biphenyls (PCBs)

A group of toxic, bioaccumulative, and persistent chemicals used as an insulating medium in transformers and capacitors.

4. Documentation

Potential information sources include external waste audits by providers of disposal services or waste balance sheets from these providers, as well as internal billing and accounting systems, and the procurement or supply management department.

5. References

- Ban Amendment to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989.
- London Dumping Convention, 1972.
- MARPOL Convention (International Convention for the Prevention of Pollution of Ships), 1973.

Labor Practices and Decent Work

Electric Utility Sector-Specific Labor Practices and Decent Work Disclosures on Management Approach

EU15: Processes to ensure the availability of a skilled workforce.

1. Relevance

The operation of electrical utilities relies on large numbers of highly skilled workers. These workers are called upon to perform highly technical tasks which require specialized skills, and mental and physical readiness. Maintaining a highly skilled workforce is essential to the sustainability and reliability of the utility's services upon which societies depend, and to ensure the safety of the workforce, equipment and operations, and the community. Often, the training (both formal and on-the-job) required to perform these jobs take years to acquire, therefore staff vacancies cannot be quickly or easily filled.

Key issues include workforce retention, renewal and expansion. This is particularly important because of the global shortage and uneven demographic (including an aging of workforce) and geographic distribution of skills. Indeed in some cases, well-trained workers from less developed countries are often attracted to more industrialised countries to the detriment of their country of origin.

2. Compilation

2.1 Report programmes including:

- Programmes to assess skills needed in the workforce
- Training programmes including apprenticeship programs for new workers and specialised training for existing workers
- Ongoing higher education for qualified technical workers, for example electrical and mechanical engineers
- Programs to source workers from beyond national boundaries
- Attraction and retention measures

Report quantitative indicators:

- % of workforce estimated to retire in next 5 years
- Rates of attraction and retention
- Average employee length of tenure

3. Definitions

None

4. Documentation

This information can be obtained from Human Resources department.

5. References

None.



EUxx: Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors.

1. Relevance

Given that contractor and subcontractor employees may engage in high-risk activities, reporting organizations are expected to ensure that they are trained on health and safety issues (e.g. electrocution, falling objects, confined spaces, containers, etc) for their own protection.

This indicator does not directly address health and safety of the communities served, but relevant health and safety training of workers indirectly ensures health and safety of the surrounding communities.

2. Compilation

2.1 Report who is given health and safety training (e.g. employees, employees of contractors and subcontractors, office staff, plant workers, field workers, etc)

2.2 Report type of training provided (e.g. onsite, offsite, formal, informal, internal training, provided by external organisation, etc)

2.3 Report programs to provide health and safety equipment for employees of all classes and the employees of contractors and subcontractors (e.g. headsets for call centre workers, rubber gloves for line workers)

2.4 Report the monitoring and compliance systems in place related to health and safety training of employees and employees of contractors and subcontractors

3. Definitions

None.

4. Documentation

This information can be obtained from Human Resources departments.

5. References

None.

Electric Utility Sector-Specific Labor Performance Indicators and Commentary on G3 Indicators

LA1. Total workforce by employment type, employment contract, and region.

1. Relevance

The size of a workforce provides insight into the scale of impacts created by labor issues. Breaking down the workforce by employment type, employment contract, and region (region refers to 'country' or 'geographical area') demonstrates how the organization structures its human resources to implement its overall strategy. It also provides insight into the organization's business model, and offers an indication of job stability and the level of benefits the organization offers. As a basis for calculations in several other Indicators, the size of the workforce is a standard normalizing factor for many integrated Indicators. A rise or fall in net employment, evidenced by data reported over the course of three or more years, is an important element of the organization's contribution to the overall economic development and sustainability of the workforce.¹

2. Compilation

- 2.1 Identify the total workforce (employees and supervised workers) working for the reporting organization at the end of the reporting period. Supply chain workers are not included in this Indicator.
- 2.2 Identify the contract type and full-time and part-time status of employees based on the definitions under the national laws of the country where they are based.
- 2.3 Combine country statistics to calculate global statistics and disregard differences in legal definitions. Although the definitions of what constitutes types of contract and a full-time or part-time employment relationship may vary between countries, the global figure will still reflect the relationships under law.
- 2.4 Report the total workforce broken down by employees and supervised workers. If a substantial portion of the organization's work is performed by workers who are legally recognized as self-employed, or by individuals other than employees or supervised workers, this should be reported.
- 2.5 Report the total number of employees broken down by type of employment contract.
- 2.6 Report the total number of permanent employees broken down by employment type.
- 2.7 Report the total workforce broken down by region, using a geographic breakdown based on the scale of the organization's operations.
- 2.8 If applicable, explain any significant seasonal variations in employment numbers (e.g., in the tourism or agricultural industries).
- 2.9 [Report on total contractor workforce by employment type, employment contract and region.](#)

¹ See GRI Guidelines on expectations regarding reporting of multiple years' data.

3. Definitions

Employment types

Full time

A 'full-time employee' is defined according to national legislation and practice regarding working time (e.g., national legislation defines that 'full-time' means a minimum of nine months per year and a minimum of 30 hours per week).

Part-time

A 'part-time employee' is an employee whose working hours per week, month, or year are less than 'full time' as defined above.

Employment Contract

An employment contract as recognized under national law or practice that may be written, verbal, or implicit (i.e., when all the characteristics of employment are present but without a written or witnessed verbal contract).

Indefinite or Permanent Contract

A permanent contract of employment is a contract with an employee for full-time or part-time work for an indeterminate period.

Fixed Term or Temporary Contract

A fixed term contract is a contract of employment as defined above that ends when a specific time period expires, or when a specific task that has a time estimate attached is completed.

A temporary contract of employment is of limited duration and terminated by a specific event, including the end of a project or work phase, return of replaced personnel, etc.

Contractor

Contractors are companies working onsite or offsite on behalf of the reporting organization with a relationship to the reporting organization determined by a contract.

A contractor may hire their own staff directly and/or hire sub-contractors or independent contractors.

Sub-contractor

Sub-contractors are companies working onsite or offsite on behalf of the reporting organization and will have a direct contractual relationship with a contractor / sub-contractor but not necessarily with the reporting organization.

A sub-contractor may hire their own staff directly or hire independent contractors.

Independent contractor

An independent contractor is an individual working for the reporting organization, a contractor, or a subcontractor who has a contract but is not a formal employee

4. Documentation

Payroll information available at the national or site level should provide data for this Indicator.



5. References

- ILO: International Classification of Status in Employment.
- ILO: Key Indicators of the Labor Market.
- ILO: LABORSTA Internet Indicators.
- United Nations: World Macro Regions and Components.

EU16: Contractor and subcontractor employees involved in construction, operation & maintenance activities

1. Relevance

Electric utility companies sometimes employ contractors and subcontractors to carry out work for either economic reasons, to cover peak demand (i.e. during maintenance), due to lack of available staff or a lack of particular skill sets. An over-reliance on contractors and subcontractors can result in issues related to:

- Lack of management control of high risk activities;
- Safety of contractor and subcontractor employees; and
- Reliability of operations.

Construction, maintenance and operation activities are important for electricity utility companies. They are most likely to impact on the reliability of service and also present the highest risk to safety of employees and society. This indicator describes the reliance of the reporting organization on contractors and subcontractors.

2. Compilation

2.1 Estimate full time equivalent days worked by contractor and subcontractor employees on electric utility systems, (generation, distribution, transmission) broken down by:

- Construction activities;
- Operation activities; and
- Maintenance activities.

2.2 The estimation can be based on the contract terms or actual time worked

2.3 State which jobs are performed by contractors and subcontractors, for example:

- Distribution and transmission line worker;
- Splicer;
- Substation operators and mechanics;
- Operators and auxiliary operators;
- Plant Mechanic (incl. Nuclear plant mechanics);
- Welders;
- Machinists;
- Technicians;
- Engineer; and
- Electrician.

3. Definitions

Contractor

Contractors are companies working onsite or offsite on behalf of the reporting organization with a relationship to the reporting organisation determined by a contract.

A contractor may hire their own staff directly and/or hire sub-contractors or independent contractors.

Sub-contractor



Sub-contractors are companies working onsite or offsite on behalf of the reporting organisation and will have a direct contractual relationship with a contractor / sub-contractor but not necessarily with the reporting organization.

A sub-contractor may hire their own staff directly or hire independent contractors.

Independent contractor

An independent contractor is an individual working for the reporting organisation, a contractor, or a subcontractor who has a contract but is not a formal employee.

Full Time Equivalent Days

'Full time equivalent days' is defined as the total number of hours worked by employees of contractors and subcontractors in a calendar year divided by 8.

4. Documentation

Human Resources Department

5. References

LA 1

EU17: Contractor and subcontractor employees that have undergone relevant health and safety training

1. Relevance

This indicator reports specifically on health and safety training for contractor and subcontractor employees. This is one element of health and safety management, LA7 gives more information on reporting topics around rates of injuries.

Given that contractor and subcontractor employees may engage in high-risk activities, reporting organizations are expected to ensure that they are trained on health and safety issues (e.g., electrocution, falling objects, confined spaces, containers, etc) for their own protection.

This indicator does not directly address health and safety of the communities served, but relevant health and safety training of workers indirectly ensures health and safety of the surrounding communities.

2. Compilation

2.1 Training programmes reported in this section should be equivalent to the training that the electric utility gives its own employees, or that meets national international or industry standards

2.2 Report the total number of contractor and subcontractor employees (broken into the categories given in EU17 Section 2.1) that have undergone health and safety training.

2.3 Report this value as a percentage of the total number of contractors and subcontractors in each category.

3. Definitions

Contractor

Contractors are companies working onsite or offsite on behalf of the reporting organization with a relationship to the reporting organisation determined by a contract.

A contractor may hire their own staff directly and/or hire sub-contractors or independent contractors.

Sub-contractor

Sub-contractors are companies working onsite or offsite on behalf of the reporting organisation and will have a direct contractual relationship with a contractor / sub-contractor but not necessarily with the reporting organization.

A sub-contractor may hire their own staff directly or hire independent contractors.

Independent contractor

An independent contractor is an individual working for the reporting organisation, a contractor, or a subcontractor who has a contract but is not a formal employee

4. Documentation

Information may be obtained through Human Resources department; management information systems, health and safety department, safety audit results, procurement department



5. **References**

None

LA4. Percentage of employees covered by collective bargaining agreements.

1. Relevance

Freedom of association is a human right as defined by international declarations and conventions, particularly ILO Core Conventions 87 & 98. Collective bargaining is an important form of stakeholder engagement and particularly relevant for reporting guidelines. It is a form of stakeholder engagement that helps build institutional frameworks and is seen by many as contributing to a stable society. Together with corporate governance, collective bargaining is part of an overall framework that contributes to responsible management. It is an instrument used by parties to facilitate collaborative efforts to enhance the positive social impacts of an organization. The percentage of employees covered by collective bargaining agreements is the most direct way to demonstrate an organization's practices in relation to freedom of association.

2. Compilation

- 2.1 Binding collective bargaining agreements include those signed by the reporting organization itself or by employer organizations of which it is a member. These agreements can be at the sector, national, regional, organizational, or workplace level.
- 2.2 Use data from LA1 as the basis for calculating percentages for this Indicator.
- 2.3 Identify the total number of employees covered by collective bargaining agreements.
- 2.4 Report the percentage of total employees covered by collective bargaining agreements.
- 2.5 Report on percentage of contractor employees working for the reporting organization covered by collective bargaining agreements.

3. Definitions

Contractor

Contractors are companies working onsite or offsite on behalf of the reporting organization with a relationship to the reporting organization determined by a contract.

A contractor may hire their own staff directly and/or hire sub-contractors or independent contractors.

Sub-contractor

Sub-contractors are companies working onsite or offsite on behalf of the reporting organization and will have a direct contractual relationship with a contractor / sub-contractor but not necessarily with the reporting organization.

A sub-contractor may hire their own staff directly or hire independent contractors.

Independent contractor

An independent contractor is an individual working for the reporting organization, a contractor, or a subcontractor who has a contract but is not a formal employee

4. Documentation

Records of formal recognition agreements and signed collective agreements with independent trade unions will normally be held by the human resources or personnel department of the reporting organization.

5. References

- ILO Convention 87, 'Freedom of Association and Protection of the Right to Organise', 1948.
- ILO Convention 98, 'Right to Organise and Collective Bargaining', 1949.
- ILO Convention 135, 'Workers' Representatives Convention', 1971.
- ILO Convention 154, 'Collective Bargaining Convention', 1981 and Recommendations 91, 'Collective Agreements Recommendation' 1951, and 163, 'Collective Bargaining Recommendation', 1981.
- ILO Declaration on Fundamental Principles and Rights at Work, 86th Session, 1998, Article 2 (a).
- OECD Guidelines for Multinational Enterprises, Section IV, Paragraph 2 (a).

LA7. Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region.

1. Relevance

Health and safety performance is a key measure of an organization’s duty of care. Low injury and absentee rates are generally linked to positive trends in staff morale and productivity. This Indicator will show whether health and safety management practices are resulting in fewer occupational health and safety incidents. [Some electric utility workers engage in high-risk activities. This work can be equally high risk for contractors and subcontractors.](#)

2. Compilation

2.1 This Indicator should provide a regional breakdown for the following:

- The total workforce (i.e., total employees plus supervised workers); and
- Independent contractors working on-site to whom the reporting organization is liable for the general safety of the working environment.

2.2 Since some reporting organizations include minor (first-aid level) injuries in their data, indicate whether such injuries are included or excluded.

2.3 [Report on health and safety performance of contractors and subcontractors working onsite or on behalf of the reporting organization off site.](#)

2.4 In calculating ‘lost days’ indicate:

- Whether ‘days’ means ‘calendar days’ or ‘scheduled work days’; and
- At what point the ‘lost days’ count begins (e.g., the day after the accident or 3 days after the accident).

2.5 Report injury, occupational diseases, lost days, and absentee rates in the reporting period using the following formulas by region:

- Injury rate (IR)

$$IR = \frac{\text{Total \# of injuries}}{\text{Total hours worked}} \times 200,000$$

Note: The injury rate should capture fatalities.

- Occupational diseases rate (ODR)

$$ODR = \frac{\text{Total \# of occupational disease cases}}{\text{Total hours worked}} \times 200,000$$

- Lost day rate (LDR)

$$LDR = \frac{\text{Total \# of lost days}}{\text{Total hours worked}} \times 200,000$$



- Absentee rate (AR)

$$AR = \frac{\text{Total \# of missed (absentee) days over the period}}{\text{Total \# of workforce s days worked for same period}} \times 200,000$$

Note: The factor 200,000 is derived from 50 working weeks @ 40 hours per 100 employees. By using this factor, the resulting rate is related to the number of employees, not the number of hours.

2.6 Report fatalities in the reporting period using an absolute number, not a rate.

2.7 Report the system of rules applied in recording and reporting accident statistics. The 'ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases' was developed for the reporting, recording, and notification of workplace accidents. Where national law follows the ILO recommendations, it is sufficient to state that fact and that practice follows the law. In situations where national law does not comply, indicate which system of rules it applies and their relationship to the ILO code.

3. Definitions

Injury

A non-fatal or fatal injury arising out of or in the course of work.

Injury rate

The frequency of injuries relative to the total time worked by the total workforce in the reporting period.

Occupational disease

A disease arising from the work situation or activity (e.g., stress or regular exposure to harmful chemicals), or from a work-related injury.

Occupational disease rate

The frequency of occupational diseases relative to the total time worked by the total workforce in the reporting period.

Lost day

Time ('days') that could not be worked (and is thus 'lost') as a consequence of a worker or workers being unable to perform their usual work because of an occupational accident or disease. A return to limited duty or alternative work for the same organization does not count as lost days.

Lost day rate

The impact of occupational accidents and diseases as reflected in time off work by the affected workers. It is expressed by comparing the total lost days to the total number of hours scheduled to be worked by the workforce in the reporting period.

Absentee

An employee absent from work because of incapacity of any kind, not just as the result of work-related injury or disease. Permitted leave absences such as holidays, study, maternity/paternity, and compassionate leave are excluded.



Absentee rate

Refers to a measure of actual absentee days lost as defined above, expressed as a percentage of total days scheduled to be worked by the workforce for the same period.

Fatality

The death of a worker occurring in the current reporting period, arising from an occupational injury or disease sustained or contracted while in the reporting organization's employ.

4. Documentation

Employee records, employee contracts, attendance records, and accident records will provide relevant data for this Indicator.

5. References

- ILO Convention 155, 'Occupational Health & Safety Convention' and Protocol 155, 1981.
- ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases, 1995.
- ILO Guidelines on Occupational Safety and Health Management Systems, 2001.

Electric Utilities Sector-Specific Commentary on G3 Human Rights Indicator

HR5: Operations identified in which the right to exercise freedom of association or collective bargaining may be at significant risk, and actions taken to support these rights.

1. Relevance

Inherent in the right to freedom of association and collective bargaining is the protection of the right of workers (and employers) to organize collectively in organizations of their own choice. The Right to Freedom of Association is a fundamental provision of the UN Universal Declaration of Human Rights and is defined by ILO Core Conventions 87 & 98.

This Indicator aims to reveal actions that the reporting organization has taken to evaluate whether opportunities exist for workers to exercise their rights to freedom of association and collective bargaining. It also aims to reveal actions that have been taken to support these rights across the organization's range of operations. This Indicator does not require the reporting organization to express a specific opinion on the quality of national legal systems.

2. Compilation

- 2.1 Identify operations in which employee rights to exercise freedom of association or collective bargaining may be at risk. The process of identification should reflect the organization's approach to risk assessment on this issue and can draw from recognized international data sources such as ILO reports (yearly report of ILO Committee of Experts on the implementation of ratified conventions and recommendations, as well as the Governing Body's reports on freedom of association).
- 2.2 Report operations identified in which employee rights to exercise freedom of association or collective bargaining may be at risk either in terms of:
 - Type of operations (e.g., manufacturing plant); or
 - Countries or geographical areas with operations considered at risk.
- 2.3 Report on any measures taken by the organization in the reporting period intended to support rights to freedom of association and collective bargaining. See the ILO Tripartite Declaration and OECD Guidelines for further guidance.
- 2.4 Report on management mechanisms to address the right to strike or instances of lock out, given the context of the industry's need to ensure continuous provision of services. Where the right to strike does not exist, report on remedial measures such as binding arbitration.

3. Definitions

Freedom of association

Workers and employers may establish and join organizations of their own choosing without the need for prior authorization.



4. Documentation

Potential information sources include the reporting organization's legal, compliance, and human resources departments.

5. References

- ILO Convention 87, 'Freedom of Association and Protection of the Right to Organise Convention', 1948.
- ILO Convention 98, 'Right to Organise and Collective Bargaining Convention', 1949
- United Nations Universal Declaration of Human Rights, 1948.
- International Covenant on Economic, Social and Cultural Rights, 1966.

Society

Electric Utilities Sector-Specific Society Disclosures on Management Approach

EU18: Stakeholder participation in the decision making process related to energy planning and infrastructure development

1. Relevance

Most electric utility markets are made up of a few large players or monopolies. At the same time, there is more direct public sector involvement in the management of supply and demand. Decisions that might be market-driven in other sectors, are not always so in the electricity sector, due to the physical nature of electricity and the demands of maintaining a stable electricity system for vital services to the population.

Electric utilities actively engage in discussions around general public policy issues (e.g., public health) and this is addressed in indicator SO5. Electric utilities also provide a particularly important input into planning process around energy strategies and infrastructure development given their role as providers of the service. The nature of this engagement and the level transparency afforded to stakeholders varies significantly.

Early informed stakeholder participation, including in the decision making process, in this sector is therefore particularly important since issues are becoming more complex and need independent input more than ever. This indicator addresses the process by which a utility develops its inputs and proposals regarding energy planning and infrastructure development.

2. Compilation

2.1 Energy planning and infrastructure development covers a range of policy decisions related to areas such as:

- Energy demand projections;
- Energy sources and technologies;
- Site planning and displacement;
- Rate and tariff setting;
- Climate change and environmental impact; and
- Others.

2.2 Identify the range of policy decisions where the reporting organization is active. This may relate to international, national or regional policy or planning or to the development of specific projects or infrastructure.

2.3 Identify the type of authorities which are engaged. These may be local regulators, governments, public agencies or commissions, etc.

2.4 Report organization-wide processes regarding the involvement of stakeholders in the decision making process regarding energy planning and development, in terms of:

- Groups to be consulted;
- Points in the decision-making process for consultation;
- How early in the decision-making process stakeholders are engaged;
- Management level within the organization responsible for the consultation;



- Information and resources provided to support participation process (including measures to ensure vulnerable stakeholders are meaningfully engaged); and
- The channels through which stakeholder participation occurs.

The organization should state how the consultation process varies depending on factors such as the type of policy or infrastructure in question or the regulatory regime.

3. Definitions

Decisions

Decisions include, but are not limited to, the siting of facilities and transmission lines, resource planning, and changes to customer programs.

Stakeholders

Stakeholders are defined as entities or individuals that can reasonably be expected to be significantly affected by the organization's activities, products, and/or services; and whose actions can reasonably be expected to affect the ability of the organization to successfully implement its strategies and achieve its objectives. This includes entities or individuals whose rights under law or international conventions provide them with legitimate claims vis-à-vis the organization.

Stakeholders can include those who are invested in the organization (e.g., employees, shareholders, suppliers), as well as those who are external to the organization (e.g. customers, communities, NGOs). For electric utilities, stakeholders covered will include, but not be limited to those invested in the organization (e.g. employees, shareholders, suppliers) and those who are external to the organization (e.g. customers, communities, regulators, policy-makers, NGOs, etc.).

Participation

Criteria for participation may include: ability to influence decisions through timely access to relevant material and mechanisms for systematic input. Degree of participation will range from information sharing, through consultation to shared decision making

4. Documentation

Potential information sources include organizational policies and procedures, results of data collection from environmental and community programs, and analysis results of external stakeholder forums, joint community committees, stakeholder reports, and other inputs. Both internal and external sources and references should be used.

5. References

None.

EU19: Approach to managing the impacts of displacement

1. Relevance

The construction or expansion of electricity utility infrastructure can result in the displacement of local residents. Affected people can experience loss of livelihoods, breakdown of social networks, and loss of access, among other impacts.

It is also recognized that other players (e.g. governments, banks, etc) are responsible for displacements, in addition to Electric Utilities.

2. Compilation

2.1 Report the approach taken by the reporting organization, including:

- Identification of affected people;
- The legal context and the approach taken to address involuntary and consensual displacement;
- Discussion of how the organization is looking to avoid displacement and how alternatives are being considered;
- Nature of consultation, e.g., formal role of local people in consultation and participation in decision-making processes;
- Preparation of resettlement plan and budget within a specific timeframe, and mechanisms to evaluate implementation;
- Compensation and other assistance to provide comparable living standards;
- Grievance mechanisms to address concerns about compensation and relocation or resettlement;
- Assessment of psychological and social costs to individuals and communities affected;
- Programs for communities to ensure their social and cultural identities are protected, this is particularly important for indigenous peoples; and
- Describe which players (e.g. governments, banks, etc) the organization is working with and how responsibilities relating to displacement are shared.

3. Definitions

Compensation

Compensation could include cash compensation, replacement housing, land, or commercial sites (e.g. shops), and additional support such as infrastructure in new resettlement sites, training, credit and job opportunities.

Involuntary Displacement

Physical displacement can be defined as relocation or loss of shelter. Economic displacement means loss of assets or access to assets which results in loss of means of livelihood. Involuntary means that the displacement is against the will of those displaced

4. Documentation

Legal department, planning department.

5. References

None.

EU20: Contingency planning measures, disaster/emergency management plan and training programs, and recovery/restoration plans.

1. Relevance

The infrastructure of most electric utilities presents potential hazards, which can have serious impacts. Examples of concerns include major accidents, natural disasters and terrorist attacks. These require contingency planning measures, disaster/emergency management plans and training programs, and recovery/restoration plans. A major incident can not only threaten the lives of surrounding communities but also leave a region without service and the company with high restoration costs.

This indicator is particularly relevant to nuclear and large scale hydro power generation, but it is applicable across the sector. This indicator describes the disaster/emergency management and recovery/restoration plans the reporting organization has in place. In many cases these plans are developed in cooperation with regional or national government.

2. Compilation

2.1 Report:

- Key event risks and assumptions;
- Approach to on-site and off-site emergency planning;
- Approach to on-site and off-site communication;
- How emergency plans are tested;
- Approval by external parties (e.g. public authorities or regulators);
- Training and preparedness measures for employees, contractors, subcontractors; and
- Adherence to specific regulatory requirements, performance standards, and/or codes of practice.

The organizational approach described should include short and long-term management responses. This should include the legal framework underpinning emergency plans and describe areas where security issues prevent full disclosure.

2.2 Report the approach for the restoration of power and other essential services.

2.3 Report how the community, authorities and industrial customers are involved in the development and implementation of these plans.

3. Definitions

Major Incident

Major accidents are exceptional events which occur very infrequently and have a high significant impact.

4. Documentation

Report to regulatory authorities.

5. References

None.

Electric Utility Sector Specific Commentary on G3 Society Performance Indicators and Commentary on G3 Indicators

SO1: Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.

1. Relevance

Organizational operations such as entering, operating, and exiting have a number of significant impacts on the sustainability of a specific area. Indicators in the GRI Framework, such as environmental emissions or economic data, will offer an overall picture of these positive and negative impacts, but may not be able to break them down to the level of individual communities or geographic areas. As such, it is important to have a measure that reflects the approach used by the organization to manage its impacts, both negative and positive, systematically across the range of communities in which it operates.

Stakeholders are interested in the robustness of the approach the organization applies to managing the impacts it has on a community. Thus, having reliable management systems in place can enhance the brand and reputation of the organization as a potential partner. It also simultaneously strengthens the ability of organizations to maintain existing operations and to initiate new ones.

2. Compilation

2.1 Report whether there are programs in place for assessing the impacts of operations on local communities:

- Prior to entering the community;
- While operating in the community; and
- While making decisions to exit the community.

2.2 Report whether programs or policies define:

- How data is collected for such programs, including by whom; and
- How to select community members (individual or group) from whom information will be gathered.

2.3 Report the number and percentage of operations to which the programs apply.

2.4 Report whether the organization's programs for managing community impacts have been effective in mitigating negative impacts and maximizing positive impacts, including the scale of persons affected. [Include discussions of programs related to:](#)

- [Ways in which information is exchanged and local population is involved, prior, during and after the event and the provision for intervener funding for the local population;](#)
- [Influx of workers and impacts on neighboring communities \(including changes to local social structures and culture\);](#)
- [Changes to land-use including loss of global commons \(e.g. access to land, natural resources, and heritage\);](#)
- [Impacts on infrastructure \(e.g. roads, housing\), and access to services \(e.g. education, utilities, healthcare\); and](#)



- [Changes to the aesthetics and quality of the landscape.](#)

2.5 Report examples of how feedback and analysis of data on community impacts have informed steps toward further community engagement on the part of the reporting organization.

3. Definitions

Impacts of operations

This refers primarily to social impacts, such as:

- Community health and safety regarding infrastructure, hazardous materials, emissions and discharges, and health and disease;
- Involuntary resettlement, physical and economic displacement and livelihood restoration; and
- Local culture, gender, indigenous peoples, and cultural heritage.

This definition excludes impacts covered by other Indicators, such as EN10 (water sources/habitats affected by water use), EN12 (areas with high biodiversity value), and LA8 (serious diseases). It also excludes voluntary contributions (in-kind and cash) to communities.

Intervener funding

[This refers to the funding of stakeholders who provide input in to the regulatory process. The funding is provided by the regulatory body, the electric utility or the state.](#)

4. Documentation

Potential information sources include organizational policies and procedures, results of data collection from community programs, and analysis results of external stakeholder forums, joint community committees, stakeholder reports, and other inputs.

Both internal and external sources and references should be used.

5. References

None.

Electric Utilities Sector Specific Society Performance Indicators

EU21: Number of people displaced by new or expansion projects related to generation facilities and transmission lines, broken down by physical and/or economic displacement.

1. Relevance

Electric utility sites invariably have an impact on the local population and new or expansion projects can result in their displacement. Both physical and economic displacement can result in a deterioration of quality of life. This indicator will report the number of people displaced by new or expansion projects and it will highlight the impact the reporting organization has had on the local community. The indicator will help to ensure transparency surrounding the impacts of the electric utility on the community. EU 21 aims to address displacements related large scale projects.

2. Compilation

2.1 Report on number of people physically and economically displaced by large projects.

2.2 Report on the number of people rehabilitated including those that may be affected positively (e.g. access to electricity, new job opportunities).

2.3 Report the causes for peoples' displacement (e.g. plant expansion, new plant, new transmission lines).

3. Definitions

Displacement

Physical displacement can be defined as relocation or loss of shelter. Economic displacement means loss of assets or access to assets which results in loss of means of livelihood.

4. Documentation

Legal department, planning department.

5. References

None.

Product Responsibility

Electric Utility Sector-Specific Product Responsibility Disclosures on Management Approach

EU22: Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services

1. Relevance

Electricity supply is a basic necessity whether supplied on- or off-grid. It is key for enabling access to many other technologies and services. Programs to improve access to electricity can deliver significant improvements to the standard of living for individuals and communities.

2. Compilation

2.1 The purpose of this indicator is to report the programs which provide and improve access to electricity and which help to avoid disconnections for residential customers

2.2 Report programs specifically targeting low income or vulnerable customers and communities which aim to improve access to electricity. The reporting organization should explain how it defines 'low income' or 'vulnerable' customers and how it identifies which of its customers are in this category.

Programs to be reported will aim to prevent disconnections and debt for low income or vulnerable customers. It should be clear which programs are supported by public funds. Examples of the sort of programs to report are:

- Subsidized payment of bills;
- Special rates;
- Helping with payment arrangements;
- Energy saving to lower payments;
- Helping people who have been disconnected to get reconnected; and
- Intermediary help by local health services.

This disclosure should not include programs covered by EU23 or by more general maintenance and expansion programs of electrical systems.

3. Definitions

Access

Access is defined as the ability to use an affordable, reliable and unrestricted electricity supply. People can be denied access to electricity for a number of reasons, including but not limited to geographic isolation and/or financial poverty

4. Documentation

Commercial, Customer Services, and Billing/Marketing departments.

5. References

None.



EU23: Practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services

1. Relevance

Provision of information is essential to ensure consumers have access to electricity delivering significant improvements to their standard of living.

Electricity and electric power generation can be lethal if not handled/generated/used in a safe manner. Electric utilities need to communicate the dangers associated with their operations and the measures in place to prevent customers being harmed.

In some areas where the primary national language may not be the dominant language, organizations should ensure that all literature, signage, labeling and communication are in a language which can be understood by all. Similarly people with disabilities should be considered when the organization communicates important customer related or health and safety information.

2. Compilation

2.1 Report programs in place to ensure that language barriers and/or disabilities do not impede the effective communication of important customer-related or health and safety information.

These may include:

- Multi-lingual billing information;
- Billing information available in brail or audio versions;
- Multi-lingual customer support; and
- Multi-lingual signage, labeling, safety warnings.

2.2 Report any programs or specific practices which help to warn people about the dangers of electricity and educate people how to use electricity safely.

3. Definitions

None.

4. Documentation

Communications, Commercial, Customer Operations/Customer Services, and Marketing Departments.

5. References

None.

Electric Utility Sector-Specific Product Responsibility Performance Indicators and Commentary on G3 Indicators

PR1: Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.

1. Relevance

This measure helps to identify the existence and scope of systematic efforts to address health and safety across the life cycle of a product and/or service. Customers expect products and services to perform their intended functions satisfactorily, and not pose a risk to health and safety. This responsibility is not only subject to laws and regulations, but is also addressed in voluntary codes such as the OECD Guidelines for Multinational Enterprises.

Efforts made to protect the health and safety of those who use or deliver the product/service have direct impacts on an organization’s reputation, the organization’s legal and financial risk due to recall, market differentiation in relation to quality, and employee motivation.

2. Compilation

2.1 In each of the following life cycle stages, report whether the health and safety impacts of products and services are assessed for improvement:

	Yes	No
Development of product concept		
R&D		
Certification		
Manufacturing and production		
Marketing and promotion		
Storage distribution and supply		
Use and service		
Disposal, reuse, or recycling		

2.2 State the processes for assessing community health risks including monitoring, prevention measures and, if applicable, long term health-related studies.

2.3 Report the percentage of significant product or service categories that are covered by and assessed for compliance with such procedures.

2.4 Identify community health risks that are assessed. Include compliance with exposure limit(s) to electric fields (in kV per m) and magnetic fields (in µT) where available, for members of the public and employees in the areas in which the reporting organization operates.

3. Definitions

Community health risks

Community health risks can include issues such as exposure to electric and magnetic fields, emissions, noise, diseases, etc. Long-term health related studies may include epidemiological studies.

Electric Fields

An electric field is an invisible force field created by the attraction and repulsion of electrical charges (the cause of electric flow), and is measured in Volts per meter (V/m). The intensity of the electric field decreases with distance from the field source.

Magnetic Fields

A magnetic field is an invisible force field created as a consequence of the movement of electric charges (flow of electricity). The magnitude (intensity) of a magnetic field is measured Tesla (T or in mT). The intensity of the field decreases with distance from the field source.

4. Documentation

Potential information sources include the reporting organization's legal and sales departments as well as the documentation collected through quality management systems.

5. References

- OECD Guidelines for Multinational Enterprises, Revision 2000.



EU24: Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases.

1. Relevance

Activities of electric utilities and electricity itself can sometimes be associated with public injuries, diseases or fatalities. This indicator helps the reporting organization to be transparent around the health impact it has on the society and indicates the reporting organization's commitment to health and safety.

2. Compilation

2.1 Report the number of individuals affected by injuries and fatalities.

2.2 Report the annual number of health and safety related legal cases (resolved and pending), including diseases and judgments affecting members of the public.

3. Definitions

Resolved and pending cases

Resolved and legally pending cases of diseases refer to cases that have been taken to court and have been filed publicly.

4. Documentation

Legal and Health and Safety Departments

5. References

None.

EU25: Percentage of population unserved in licensed distribution areas**1. Relevance**

It is universally accepted that electricity improves quality of life. This indicator provides a measure of the extent of electrification. There are cases when a percentage of the population is not provided with electricity even though they are in a licensed distribution area. Reasons for this can include poor transmission or distribution infrastructure and widely distributed and/or isolated populations.

This indicator is intended to be reported by organizations with distribution operations.

2. Compilation

2.1 Identify areas and population within licensed distribution area where the grid is absent, by rural and urban areas.

2.2 Report estimated percentage of population unserved based on total population within licensed distribution area.

3. Definitions***Licensed Distribution Areas***

Licensed distribution areas contain networks, owned/operated by licensed operators, which carry electricity to the customer in which the operator has the concession or monopoly.

Unserved population

Those who live in an area where electricity infrastructure is not available

4. Documentation

Census documentation, number of residential accounts, grid coverage data.

5. References

None.



EU26: Number of residential disconnections for non-payment, broken down by duration of disconnection.

1. Relevance

There are cases when people do not pay for their residential electricity for a variety of different reasons. In such cases electricity companies may disconnect those customers from the grid until the payment has been made.

The length of time a household is without electricity, as well as the speed at which electric utilities reconnect following payment arrangements, can have a significant impact on health, safety and/or standards of living.

2. Compilation

2.1 Report number of customers broken down by total length of time between disconnection and arrangement of payment following five categories: <48 hours, 48 hours – 1 week, 1 week- 1 month, 1month- 1 year, >1year.

2.1 Report number of customers broken down by total length of time between arrangement of payment and reconnection following three categories: <24 hours, 24hours – 1 week, >week.

3. Definitions

None.

4. Documentation

None.

5. References

None.

EU27: Power outage frequency.**1. Relevance**

An electric utility should provide quality service with uninterrupted power supply and consistent voltage. In some cases, electricity cannot be provided continuously and power outages can occur.

2. Compilation

2.1 Refer to IEEE Standard 1366-2003 for compilation details.

2.2 Report System Average Interruption Frequency Index (SAIFI) over the course of the year.

3. Definitions***System Average Interruption Frequency Index (SAIFI)***

SAIFI is the average number of interruptions that a customer would experience and is measured in units of interruptions per customer. It demonstrates the reliability of the reporting organization's supply. $SAIFI = (\text{total number of customer interruptions}) / (\text{total number of customers served})$
It is usually measured over the course of a year.

Power Outage

A power outage (also known as a power cut, power failure, power loss, blackout or interruption) is the loss of electricity supply to an area.

4. Documentation

None.

5. References

- IEEE Standard 1366-2003.

EU28: Average power outage duration.**1. Relevance**

This indicator is linked to EU27. An electric utility should provide quality service with uninterrupted power supply and consistent voltage. In some cases, electricity cannot be provided continuously and power outages can occur. Duration demonstrates the ability of a utility to restore power in a timely manner.

2. Compilation

2.1 Refer to IEEE Standard 1366-2003 for compilation details.

2.2 Report System Average Interruption Duration Index (SAIDI) over the course of the year.

3. Definitions***System Average Interruption Duration Index (SAIDI)***

SAIDI is the average outage duration for each customer served, and is measured in units of time, often minutes or hours.

SAIDI = (sum of all customer interruption duration) / (total number of customers served)

It is usually measured over the course of a year.

Power Outage

A power outage (also known as a power cut, power failure, power loss, blackout or interruption) is the loss of the electricity supply to an area.

Duration

Duration refers to the period of time between the beginning of the interruption and the return of the electricity supply.

4. Documentation

None.

5. References

- IEEE Standard 1366-2003.

EU29: Average plant availability factor by energy source and by regulatory regime

1. Relevance

Generation plants do not operate all the time because planned and unplanned outages occur. These outages can result from maintenance and operational issues. Unplanned outages have financial implications since preferred generation capacity is often replaced by less efficient and more expensive plant.

2. Compilation

2.1 Divide unavailability into planned and unplanned outages.

2.2 Report the average availability of the fleet by energy source and by regulatory regime.

2.3 Report the availability as a percentage.

3. Definitions

Availability Factor

The availability factor of a power plant is the amount of time that it is able to produce electricity over a certain period, divided by the amount of the time in the period. Occasions where only partial capacity is available may or may not be deducted. The availability factor should not be confused with the capacity factor.

4. Documentation

Operations department.

5. References

None.