**Annual Energy and Emissions Intensity Report to UTC**

**Introduction**

On October 10, 2015 a new section in the Utilities and Transportation Commission’s (UTC) rule implementing the Energy Independence Act, WAC 480-109-300, became effective. The new section of the rule requires all electric utilities regulated by the UTC to submit an energy and emission intensity report by June 1st or earlier each year starting in 2016.

The following paragraphs provide details on how to submit the annual energy and emissions intensity report, a template showing how the required report might be efficiently organized, as well as an example spreadsheet and additional information related to this new reporting requirement.

**Submitting the 2015 Energy and Emissions Intensity Report**

A new docket number has been established in advance of the deadline for the 2015 Energy and Emissions Intensity Reports. The docket number for the 2015 reports is [UE-160190](http://www.utc.wa.gov/docs/Pages/DocketLookup.aspx?FilingID=160190). The UTC requests that these reports be submitted only in electronic format, in both native and PDF file formats, to the records center. Please submit the reports to the UTC Records Center at: [records@utc.wa.gov](mailto:records@utc.wa.gov) with the subject line UE-160190, 2015 Energy and Emissions Intensity Report.

**Energy and Emissions Intensity Report Spreadsheet and Template**

The report should be submitted electronically to the Records Center and include a spreadsheet with the calculated metrics required in the rule. Commission Staff created a sample spreadsheet for the year 2015 that can be adapted for use by each utility. Each utility can input their data in the shaded cells of the spreadsheet and various values are calculated automatically. The sample year 2015 spreadsheet is available from this link [UE-160190](http://www.utc.wa.gov/docs/Pages/DocketLookup.aspx?FilingID=160190). The shaded values in the sample spreadsheet should be cleared before use. The same calculations will also be needed for the prior 9 years to create a 10-year trend for the metrics, as required by the rule. The spreadsheet is unprotected and can be copied to facilitate parallel calculations for all 10 years.

The summary tab of the sample spreadsheet shows the metrics required by the rule in bold fonts. Hypothetical data is filled in the sample spreadsheet. Data input is only needed in the shaded cells in each of the tabs. An image of cells A1 through G22 on the summary tab using hypothetical data are shown below.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Summary Energy and Emissions Intensity Report** | | | | |  |  |
|  |  |  |  |  |  |  |
|  | Utility : | EXCELLENT UTILITY | |  |  |  |
| Reporting for year : | | 2015 | **MWh per Capita** |  |  |  |
| Population Served : | | 2,080,260 | **8.68** |  |  |  |
|  |  |  |  |  |  |  |
|  | *Energy Intensity Metrics* | | |  |  |  |
|  |  |  |  |  | Customer | **MWH per** |
|  |  |  | MWh at Meter | MWh Proportion | Count | **Customer** |
| Residential Customers | | | 8,321,011 | 46.1% | 693,420 | **12.0** |
| Commercial Customers | | | 7,152,138 | 39.6% | 59,601 | **120.0** |
| Industrial Customers | | | 2,575,602 | 14.3% |  |  |
|  | Total Load Served | | 18,048,751 |  |  |  |
|  |  |  |  |  |  |  |
|  | *Emissions Intensity Metrics* | | |  |  |  |
|  |  |  |  | Percent of | **Short** |  |
|  |  |  | Busbar MWh | Total Load | **Tons CO2** |  |
| Known Resources Serving WA | | | 17,864,735 | 95.8% | 3,007,133 |  |
| Unknown Resources Serving WA | | | **788,297** | **4.2%** | **274,327** | **% of 1990 CO2** |
|  |  |  | 2015 | Tons CO2 | **3,281,460** | **112.2%** |
|  |  |  |  |  |  |  |
|  |  |  |  |  | 1990 Short Tons CO2 | 2,925,551 |

The following text provides an outline of how the energy and emissions report may be efficiently organized.

1. Executive Summary
2. Prior 10-year annual metrics for all generating resources serving Washington customers:

* Average MWh per residential customer
* Average MWh per commercial customer
* MWh per capita
* Annual CO2 emissions (short tons)
* Ratios of Annual CO2 emissions to CO2 emissions in 1990

***Subtotal Metrics - Energy and Emissions from Unknown Generation Sources***

* Annual CO2 emissions (short tons) from unknown generation sources
* Annual MWh delivered to retail customers from unknown generation sources
* Percentage of load served by unknown generation sources

1. Trend analysis narrative and graphics
2. Appendices – information sources, metrics calculation methodology, formulas explanations, and other supporting documentation

**Unknown Generation Emissions and Trend Analysis**

The unknown generation sources emissions must be based on the WA Dept. of Commerce net-system mix (spot market) associated with the corresponding generation year.

In addition to the requirement to report the value of the metrics for the past ten years, the report must also include a narrative describing the analysis and findings, and accompanying graphics of 10-year trends in the metrics and likely causes of changes, or lack of changes, in the metrics over time.

Formulas may be included in the body of the report. For clarity, formulas should be accompanied by narrative explanations including all symbols, variables and abbreviations. Additional narrative regarding formulas, descriptions of methodology used, information sources, and any other supporting documentation should be placed in appendices to provide clarity regarding how the report was prepared and allow easier reading of the main body of the report.

**Reporting Deadline**

The annual energy and emissions intensity reports are due to the UTC Records Center on or before June 1st of each year beginning in 2016. The section of the rule containing the reporting requirements, WAC 480-109-300, is shown on the following page.

**Reporting Assistance**

If you have any questions regarding these new reporting requirements you may call David Nightingale at the UTC at (360) 664-1154, [dnightin@utc.wa.gov](mailto:dnightin@utc.wa.gov).

**WAC 480-109-300**

**Energy and emissions intensity metrics.**

(1) A utility must report metrics of energy and emissions intensity to the commission on or before June 1st of each year. The report must include annual values for each metric for the preceding ten calendar years. Each value reported must be based on the annual energy or emissions from all generating resources providing service to customers of that utility in Washington state, regardless of the location of the generating resources. When the metrics are calculated from generators that serve out-of-state and in-state customers, the annual energy and emissions outputs must be prorated to represent the proportion of the resource used by Washington customers.

(2) The energy and emissions intensity report shall include the following metrics:

(a) Average megawatt-hours per residential customer;

(b) Average megawatt-hours per commercial customer;

(c) Megawatt-hours per capita;

(d) Million short tons of CO2 emissions; and

(e) Comparison of annual million short tons of CO2 emissions to 1990 emissions.

(3) **Unknown generation sources.** For resources where the utility purchases energy from unknown generation sources, often called "spot market" purchases, from which the emission rates are unknown, the utility shall report emission metrics using the average electric power CO2 emissions rate described as the net system mix (spot market) in the Washington state electric utility fuel mix disclosure reports compiled by the department pursuant to RCW [19.29A.080](http://app.leg.wa.gov/RCW/default.aspx?cite=19.29A.080). For the resources described in this subsection, a utility must show in the report required in subsection (1) of this section the following:

(a) Short tons of CO2 from unknown generation sources;

(b) Megawatt-hours delivered to its retail customers from unknown generation sources; and

(c) Percentage of total load represented by unknown generation sources.

(4) The energy and emissions intensity report must include narrative text and graphics describing trends and an analysis of the likely causes of changes, or lack of changes, in the metrics.