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July 9, 2019

MEMORANDUM

TO: Power Committee Members

FROM: Kevin Smit, Tina Jayaweera, John Shurts, Andrea Goodwin

SUBJECT: Model Conservation Standards (MCS) and Surcharge Methodology for the 2021 Power Plan

BACKGROUND:

Presenter: Kevin Smit

Summary: In preparation for the 2021 Power Plan, staff will be providing the Power Committee a series of presentations on different aspects of developing the Power Plan. This presentation focuses on the development of the energy efficiency Model Conservation Standards (MCS), related surcharge and surcharge methodology. The Northwest Power Act requires the Council include in the Power Plan an energy conservation program that includes model conservation standards, which are specific actions to be taken to acquire energy efficiency.

The Northwest Power act also permits the Council to recommend that Bonneville's Administrator impose a surcharge on customer utilities that have not implemented the MCS. If the Council were to recommend surcharges, the Power Plan must include a methodology for calculating the surcharge.

Relevance: The MCS and surcharge methodology are specifically required by the Northwest Power Act and will be finalized after the resource strategy has been developed for the 2021 Plan.

Workplan: A.1.1 Prepare EE supply curves for the 2021 Plan

Background: Relevant sections of the Northwest Power Act addressing the MCS, surcharge and surcharge requirements include Sections 4(e)(3)(A), 4(e)(3)(G) and 4(f).

Model Conservation Standards and Surcharge Methodology

Kevin Smit

July 2019 Power Committee Meeting



THE 2021
NORTHWEST
POWER PLAN
FOR A SECURE & AFFORDABLE
ENERGY FUTURE

Energy Efficiency Supply Curves

MCS & Surcharge Methodology

Resource Strategy Analysis



THE 2021
NORTHWEST
POWER PLAN

Model Conservation Standards (MCS)

The Northwest Power Act directs the Council to include in the Plan an energy conservation program that includes “model conservation standards” (MCS).

The MCS are a prescriptive means of acquiring energy efficiency – that is, specific requirements such as building insulation levels or utility program features.



Model Conservation Standards (MCS)

The Power Act directs to Council to adopt and include model conservation standards (MCS) applicable to:

- (i) new and existing structures;
- (ii) utility, customer, and governmental conservation programs;
- (iii) other consumer actions for achieving conservation.

The Act requires:

- that the standards reflect geographic and climatic differences within the region and other appropriate considerations.
- that the Council design the MCS to produce all power savings that are cost-effective for the region and economically feasible for consumers, taking into account financial assistance from the Bonneville Power Administration and the region’s utilities.



MCS - Surcharge and Surcharge Methodology

The Northwest Power Act also authorizes the Council to recommend that Bonneville impose a surcharge on customers in areas that have not implemented the MCS.

The power plan is to include a methodology for calculating the surcharge before the Council could recommend a surcharge.

The Council may choose not to recommend a surcharge.



MCS - Surcharge Methodology

- Per Section 4(f)(2), the surcharge may be imposed on Bonneville customers for those portions of their regional loads that are within states or political subdivisions that have not, or on customers who have not, implemented conservation measures that achieve savings of electricity comparable to those that would be obtained under the model conservation standards.
- The surcharge is to be designed to recover additional costs incurred because projected energy savings have not been achieved.
- The surcharge must be no less than 10 percent and no more than 50 percent of the Administrator's applicable rates for a customer's load or portion of load.
- The intent of the surcharge possibility is to provide a strong incentive to utilities and state and local jurisdictions to adopt and enforce the standards or comparable alternatives.



A Little History

- In the first three Power Plans, the focus of the MCS was on developing and adopting efficient building codes.
 - Very prescriptive, building code-like standards
 - This resulted in strong state building energy codes
 - NW States continue to update their codes and utilities support this effort through their own efforts and NEEA
- The Fourth Plan included prescriptive requirements for new electric-heated homes, new commercial buildings and fuel conversions to electric space & water heat in existing buildings
 - No-surcharge recommended due to emerging competitive wholesale power market
- The Fifth and Sixth Plans included some prescriptive requirements and added utility new construction program requirements for “all cost effective conservation”
- The Seventh Plan focus was globally on “acquire all cost-effective efficiency” as well as on more specific actions (e.g. detailed process to acquire distribution efficiency).

Surcharge recommendation included in the first three plans. No surcharge ever imposed.

No surcharge recommendation included in Plans 4 through 7.



Example MCS Table from Plan 1

Table J4-1.
Thermal Performance Criteria for Low-Rise Residential Buildings
(Occupancy Groups R-1 and R-3)

Element	Climate Zone*					
	Zone 1 Group R		Zone 2 Group R		Zone 3 Group R	
	Div. 3	Div. 1	Div. 3	Div. 1	Div. 3	Div. 1
Walls ¹ (U _O Value)	.10	.115	.09	.115	.09	.115
Roof/Ceiling ² (U _O Value)	.028	.035	.028	.035	.028	.035
Floors over Unconditioned Spaces (U _O Value) ³						
Exposed to Outdoor Air	.05	.05	.035	.035	.035	.035
All Others (U _O Value)	.08	.08	.05	.05	.05	.05
Slab-on-Grade Floors						
Unheated ⁴ (R Value)	5	5	10	10	10	10
Heated (R Value)	10	10	12	12	15	15

*Zone 1 = 4000 - 6000 heating degree days at 65° F
 *Zone 2 = 6001 - 8000 heating degree days at 65° F
 *Zone 3 = over 8000 heating degree days at 65° F

¹Includes all components of gross wall area (see definition)

²Includes all components of skylights in gross roof/ceiling area (see definition)

³Includes all components of gross floor area (see definition)

⁴Not incorporating a heating system within floor slab



MCS in the Seventh Plan

The focus of the Seventh Power Plan MCS is on three areas intended to improve program design and delivery:

- **Ensuring full participation in programs**
 - MCS-1 – Improve participation in programs from “hard to reach” or “underserved” markets
- **Achieving voltage optimization**
 - MCS-1 – Evaluate and pursue savings on utility distribution circuits
- **Enhancing codes and standards**
 - MCS-3 through MCS-7 – efforts related to supporting building codes and Federal standards
 - Much of this is accomplished through NEEA



Summary

1. **MCS: The 2021 Plan must include Model Conservation Standards.**
 - a. MCS is crafted after a resource strategy has been developed for the 2021 Plan
2. **Surcharge:**
 - a. The 2021 Plan should include a surcharge methodology, and must include a surcharge methodology if the Council decides to recommend a surcharge.
 - b. The Council will have to decide if it wants to include in the plan a recommendation to Bonneville to impose a surcharge if the MCS or comparable savings are not achieved.

