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August 31, 2006

## MEMORANDUM

**TO:** Power Committee

**FROM:** Charlie Grist

**SUBJECT:** Alternative Approaches to Commercial MCS

This memo recommends an approach to updating the Council's Model Conservation Standards (MCS) for new commercial buildings.

Last month I briefed the power committee on preliminary results of a regional project on building codes called NWBest. Results from that project could form the basis for specifying code-language detail to implement the Council's fifth power plan MCS for commercial buildings. During that briefing, two broad alternatives were presented. First, the Council could adopt the NWBest best-of-region code language as the implementation of the fifth plan MCS. Alternatively, the Council could decide to upgrade the commercial MCS to call for measures more stringent than the best-of-region model standard. This alternative would call for an amendment to the power plan, with its attendant procedural requirements, including notice and comment and hearings in all four states.

Ultimately, the staff believes the Council should revise its commercial MCS and seek the more-stringent standard. That will take some time and effort. In the mean time, staff recommends that the Council implement its current MCS by adopting a detailed specification of its existing best-of-region MCS.

The question was raised at the power committee about whether economic analysis on the provisions in the best-of-region were needed.<sup>1</sup> For the best-of-region MCS implementation we

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<sup>1</sup> During discussions at the August 2006 power committee meeting, Council member Kempton questioned the rationale that the best-of-region approach, which is a combination of best efficiency provisions from among state codes or ASHRAE, meets the twin tests of cost-effectiveness to the power system and economic feasibility to the consumer. Of particular interest was the issue of whether a more efficient provision in one state could be justified as economically feasible to consumers in another state.

identify three paths for going forward to address those concerns. These choices are outlined and discussed below and in the footnotes. We also discuss our reasons to begin the process to revise the MCS to a more stringent standard.

**Retain Best-of-Region MCS - Path A: Implement Commercial MCS in the power plan through specifications based on the NWBest best-of-region baseline code.** Under this alternative, the Council would notify the region of its intention to implement its fifth power plan MCS using the best-of-region code language that has been developed through the NWBest project. The notice would include discussion of how the best-of-region standard was developed and an explanation of the assertion that cost-effectiveness and consumer economic feasibility tests are met by combination of most-efficient provisions of existing regional codes and ASHRAE 90.1 without significant additional analysis.<sup>2</sup>

Under Path A, a Council-approved MCS specification would be available for consideration across the region and in national forums sooner than any other alternative. The Council would be following through with its intent in the fifth plan MCS to “consult with the Administrator, States, and political subdivisions, customers of the Administrator, and the public to assist in determining which provisions of existing standards are the most efficient, and provide clear code language, are easily enforced and meet the conditions for model conservation standards set forth in the Regional Act.”<sup>3</sup> On the other hand, a best-of-region code will not be the most stringent MCS possible. A best-of-region MCS leaves cost-effective savings identified in the plan, and achievable through codes, on the table to be targeted instead by utility programs. However, the best-of-region MCS specification would be available to the region until it could be replaced by a more stringent commercial MCS when analytical and administrative requirements are completed. Staff favors this path for its simplicity and speed.

**Retain Best-of-Region MCS - Path B: This option is largely the same as Path A, but the notice portion would include a more detailed analysis of economic feasibility to the consumer.** An analysis of consumer economic feasibility would be developed.<sup>4</sup> Such an analysis would have to compare the least stringent and most stringent application of dozens of code provisions and make the case that the upgrade to the most stringent provisions meets the Council’s test of economic feasibility to the consumers in the least-stringent jurisdictions.<sup>5</sup> Such

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<sup>2</sup> Such a discussion would include the following logic. With regard to cost-effectiveness to the power system, many of the substantive provisions in the best-of-region code form the baseline against which energy efficiency opportunities in the power plan are compared. The plan analyzes measures beyond the most stringent of the existing codes and finds them cost-effective to the power system. If measures beyond code are cost-effective to the power system, there is no reason to prove measures less than code are cost-effective. With regard to economic feasibility to the consumer, the Council would continue to make the case that due to the nature of the adoption processes, energy codes represent minimum levels of efficiency that are perceived as economically feasible. In the non-residential code arena, the stringency and feasibility of codes are largely determined by professional consensus among practitioners participating in local code adoption processes. Therefore, they are in practice economically feasible for consumers. The fact that the provisions are in code some place in the region, or in ASHRAE, is strong evidence that they are economically feasible for customers everywhere in the region.

<sup>3</sup> Fifth Power Plan, Appendix F page F-8.

<sup>4</sup> As in Path A, there is no reason to prove measures less than code are cost-effective to the power system when the plan demonstrated measures beyond code are cost-effective.

<sup>5</sup> The Act requires that the Council’s Model Conservation Standards be economically feasible for consumers taking into account any financial assistance made available through Bonneville and the region’s utilities. The Council’s test for economic feasibility has historically been based on a life-cycle cost of owning and operating a building or a home. The sophistication of the test has evolved over time. We assume the Council would revisit how to apply the

an analysis would take at least several months to complete.<sup>6</sup> This path might provide a stronger analytic basis for the economic feasibility test. But, depending on the amount of time required for methodology development and analysis, it would cost considerable contractor and staff time and delay implementation of the best-of-region MCS specifications.

**Retain Best-of-Region MCS - Path C: This path would leave the fifth plan MCS as a generic best-of-region standard.** This is similar to a no-action path. Absent specifications of efficiency levels for the best-of-region provisions, the MCS has limited guidance for local or national code processes. It would leave the interpretation of what levels of efficiency are “best”, cost-effective, and economically feasible for the consumer to the local jurisdictions that promulgate the codes. Council staff could work with local jurisdictions during code adoption processes to specify efficiency levels based on the NWBest best-of-region product. Such an approach, however, would lack the Council’s “seal of approval.”

**Upgrade to a High-Efficiency MCS: Develop a more stringent MCS, notice the provisions, take comment and amend the power plan if the more stringent MCS is warranted.**

Under council policy, staff believes the commercial MCS would be more valuable to the region if it were upgraded from best-of-region to a more stringent model standard. Council policy on the appropriate efficiency levels for MCS has been that, absent a surcharge recommendation, the MCS efficiency levels for commercial buildings should be set to promote the most efficient new buildings possible consistent with the cost-effectiveness to the power system and consumer economic feasibility specifications in the Act. Absent a surcharge, the MCS should be an “aspire to” standard. Whereas with an accompanying surcharge recommendation, policy has been that MCS levels should be set at assumed lower consumer economic feasibility levels.

The process for adopting a more-stringent MCS would go something like this. An MCS more stringent than the best-of-region would be proposed. The more stringent MCS would be based on NWBest provisions beyond the best-of-region code that are now being completed. This version would be noticed as a proposed revision to the commercial MCS in the power plan rather than an implementation of the existing MCS. A more stringent MCS would require a power plan amendment and associated process. A revised MCS could be part of any other power plan amendments determined necessary by the Council as part of the biennial plan review, or it could be considered in a separate amendment process.

Analytic work on cost-effectiveness and economic feasibility would need to be performed on NWBest measures that go beyond the best-of-region MCS. With regard to the issue of cost-effectiveness to the power system, many of the measures in NWBest are in the fifth power plan and are cost-effective. So analysis of those is would be relatively easy. Any measures not addressed in the power plan would require additional cost-effectiveness analysis. Furthermore, there is no analysis of economic feasibility to the consumer in the power plan. Economic

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test for economic feasibility in the case of commercial buildings and this would take time. Applying the sophisticated life-cycle cost methodology used in the Council’s residential MCS analysis may not be appropriate for commercial-sector analysis.

<sup>6</sup> For commercial building owners, the primary input to the economic feasibility test that differs between jurisdictions is retail electricity rates. It may be possible to simplify the economic feasibility analysis if an analysis of retail rates shows similar frequency distributions between the states.

feasibility analysis would require considerable time and effort to produce depending on the methodology chosen. This might take several months to complete.

On the positive side of upgrading to the more stringent MCS, an “aspire-to” model standard would be available to the public, and might lead to more stringent codes in the states. If so, energy codes would capture some of the targeted conservation in the power plan, reducing costs and scope for utility efficiency programs for new commercial buildings. If states do not adopt it in codes, the more stringent MCS would also be available as target specifications for utility programs. A more stringent MCS would be consistent with Council policy that absent a surcharge, MCS levels should be set at the highest efficiency levels possible within the cost-effectiveness and economic feasibility constraints of the Act.

### **Staff Recommendation**

Staff believes that the Council should implement the current MCS under Path A and initiate an MCS revision to upgrade the MCS to a more stringent model standard. Path A would establish a specification of the Council’s fifth plan best-of-region MCS. It would do so in the near future completing implementation of the fifth power plan MCS and giving the region specific guidance on a minimum model standard until an upgraded “aspire-to” standard can be fully developed and vetted. In the mean time the staff can initiate analysis of an upgraded MCS. Once completed, the Council would review the analysis of the more stringent standard, consider the improvements over the best-of-region model standard and determine whether or not to go ahead with the more stringent model standard and plan amendment.

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