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Attorney for the Commission Staff

## BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION	OF)	
<b>IDAHO POWER COMPANY TO IMPLEME</b>	NT )	CASE NO. IPC-E-06-32
A DEMAND SIDE MANAGEMENT INCENT	TIVE )	
PILOT PROGRAM.	)	COMMENTS OF THE
	)	<b>COMMISSION STAFF</b>
	)	
	)	

**COMES NOW** the Staff of the Idaho Public Utilities Commission, by and through its Attorney of record, Scott Woodbury, Deputy Attorney General, and in response to the Notice of Application, Notice of Modified Procedure and Notice of Comment/Protest Deadline issued on January 4, 2007, submits the following comments.

#### **BACKGROUND**

On December 18, 2006, Idaho Power Company (Idaho Power; Company) filed an Application with the Idaho Public Utilities Commission (Commission) requesting authority to implement a pilot program that provides for positive incentives (increased revenue or payments) or negative incentives (reduced revenue or penalties) for achieving, or failing to achieve, agreed-upon levels of performance in implementing demand-side management (DSM) programs.

Idaho Power proposes that the DSM incentive program first be operated as a pilot program and only applied to a single DSM program for a three-year period. The Company's Application is

separate from but related to the Joint Motion for Approval of Stipulation filed December 18, 2006 in Case No. IPC-E-04-15 (Application to Implement a Decoupling Mechanism).

### **Proposed Pilot Program**

In this Application Idaho Power requests authority to implement a DSM incentive mechanism which would allow the Company to retain a portion of the net benefits accruing from a DSM program operated by the Company. The incentive would be earned if the Company is "exceptionally successful" in implementing the DSM program. Conversely, the incentive mechanism would require a penalty payment by Idaho Power if achievement indicators of the selected DSM program fall below last year's achievement.

Based on discussions between the parties in the IPC-E-04-15 case workshops, Idaho Power has selected the ENERGY STAR® Homes Northwest program as the DSM program to be used as the pilot to test the efficacy of a DSM incentive program. The ENERGY STAR Homes Northwest program is currently operated by the Company to acquire the resources identified in the Residential New Construction Option in the Company's 2004 IRP. The essential feature of this program is a prescriptive building standard, also called a building option package (BOP), that is estimated to result in approximately 30% greater energy efficiency compared to the existing Idaho residential building code. Under the program, the Company provides an incentive payment of \$750 to the builder of each home built to the higher standard. The program also provides marketing to encourage participation in the program. The Idaho Energy Division (IED) certifies that homes are built to the standard and conducts a quality assurance process. The Northwest Energy Efficiency Alliance (NEEA) provides the builder outreach and training components of the program. On average, a home constructed to the ENERGY STAR standard in Idaho will save 2,078 kilowatt hours (kWh) annually as measured at the meter or 2,305 kWh including line losses. This estimate is based on an engineering simulation study, conducted for the Company in early 2004 by Ecotope Consulting to determine the program savings potential in Idaho.

The ENERGY STAR Homes Northwest program, the mechanics of the incentive program proposed by the Company and the rationale supporting the DSM incentive program are more particularly described in the testimony of Company witness Timothy E. Tatum filed with the Application.

Idaho Power is proposing a three-year pilot beginning in 2007 and ending at the end of 2009. Under the pilot the Company would receive an incentive payment if the market share of

homes constructed under the ENERGY STAR Homes Northwest program exceeds: (1) 7% of the total number of homes permitted in Idaho Power's service area in 2007, (2) exceeds 9.8% of total service area homes permitted in 2008 and (3) exceeds 11.7% of total service area homes permitted in 2009. These percentage levels would be the target goals and if Idaho Power exceeds these targets, it would receive an incentive payment equal to the percentage benefit that exceeds the target. For example, if Idaho Power is able to achieve 105% of the 7% target percentage in 2007, Idaho Power would receive a payment equal to 5% of the total program net benefits. Net benefits for the purpose of this pilot are equal to total Idaho Power benefits less its direct program costs (excluding NEEA's costs). The incentive program would be capped at 10% of program net benefits. Penalties, on the other hand, would be levied at a fixed 50% of net benefits lost for 2007, 2008 or 2009 if in any of those years Idaho Power's ENERGY STAR Homes Northwest program fails to reach a market share of 4.9% (or 3.9%) preliminarily estimated as the achievement in 2006.

#### **ANALYSIS**

Rewarding Idaho Power for exceptional achievement in encouraging construction of homes that are cost-effectively built to reduce both overall energy consumption and peak demand is conceptually appealing. Clearly, Idaho Power's customers will benefit if more homes in the Company's Idaho service area are built to Energy Star standards, as opposed to minimum building code standards.

In seeking a good program to test the DSM incentive concept, Idaho Power said it analyzed all of its programs for the best candidate. Regardless of this extensive search for the best program to trial, the metrics of the proposed DSM incentive pilot suffer technical difficulties in the following areas: 1) arbitrariness in setting reasonable, "average" achievement goals; 2) uncertainty in measuring the actual Energy Star homes percentage achieved; 3) ambiguity in determining what constitutes "exceptional" and "poor" levels of achievement; 4) potential for rewarding or penalizing Idaho Power due to factors unrelated to its program efforts; 5) necessary but problematic exclusion of regional marketing costs and benefits; 6) calculating the incentive or penalty using allocation of joint costs based only on heating and cooling degree days, not on actual energy savings or peak reductions; and 7) uncertainties of average savings per home and base percent of Energy Star homes achieved in 2006. Some of these difficulties will be encountered with other DSM programs if the pilot incentive mechanism were eventually extended to them. The numerous challenges warrant close monitoring of this pilot.

The first difficulty, setting reasonable, "average" goals, became apparent during discussions prior to the filing of this Application. Idaho Power had suggested setting Energy Star homes average goals for 2007 through 2009 equal to those calculable from its 2004 IRP megawatt-hour savings potential listed in its generic "residential efficiency (new construction)" program.

However, Staff noted that the 2004 IRP savings potentials for 2008 and 2009 were far below Idaho Power's pro rata share of regional goals for Energy Star Homes Northwest, which had had its goals recently reduced by the Northwest Energy Efficiency Alliance (NEEA). Idaho Power and Staff ultimately agreed that the Company's goals should mirror NEEA's "utility" goals for the purposes of this pilot. Absent NEEA's relatively independent achievement goals, there would have been no reasonable benchmark with which to gauge Idaho Power's performance objectives. And, given NEEA's own fluctuating goals and differences in data sources and assumptions, even having this independent benchmark does not completely eliminate arbitrariness of setting goals. Expansion of the incentive concept to other DSM programs, for which there are no independent benchmarks, may be even more arbitrary and contentious.

The table below compares estimates of Energy Star homes goals based on the two sources and actual or estimated achievements for 2005 and 2006:

Year	NEEA E.S.	NEEA IPC-	IPC 2004	IPC 2004 est.	IPC actual	IPC actual
	"utility" %	equiv. E.S. #	IRP E.S. #	IRP E.S. %	E. Star #	E. Star %
2005	1.2 %	164	464	3.4 %	203	1.5 %
2006	3.8 %	391	675	6.6 %	400 (est.)	3.9 %
2007	7.0 %	681	680	7.0 %		
2008	9.8 %	860	690	7.9 %		
2009	11.7 %	905	700	9.0 %		

It should be noted that NEEA-derived numbers were interpolated from a June 26, 2006, memo to NEEA's board of directors and, thus, its 2005 numbers were historical, while Idaho Power's 2004 IRP numbers were all forecast. The table incorporates estimated overall declining growth rates.

<sup>&</sup>lt;sup>1</sup> "Utility" goals are defined as the estimated numbers of Energy Star homes for which builders receive utility rebates and excludes the estimated increasing numbers of Energy Star homes that will be built without rebates.

The second difficulty, measuring the actual Energy Star homes percentage achieved, is due to not having an accurate, practicable method of counting total single-family homes built in Idaho Power's service territory, to serve as the denominator in calculating Energy Star's percent. Idaho Power stated that it does not currently collect this information and that it would be prohibitively expensive to do so. Furthermore, the Company suggested that home construction and permit data are typically derived from very small samples over wide geographic areas that are difficult to reasonably interpolate to Idaho Power's specific areas of service within Idaho. The data source that Idaho Power decided was the best one publicly available, Wells Fargo Bank Idaho Construction Report, consists of permits issued for building single-family homes in much of Idaho Power's service area. Unfortunately, this "best" building permit data source omits many cities and unincorporated areas in counties served by Idaho Power. For example, some of the missing cities are: Eagle, Kuna, Garden City, Star, Middleton, Horseshoe Bend, Greenleaf, New Plymouth, Marsing, Homedale, Wilder, Parma, Midvale, Cambridge, Council, New Meadows, Riggins. Hagerman, Buhl, Filer, Castleford, Kimberly, Hansen, Murtaugh, Eden, Hazelton, Oakley, Aberdeen, Inkom. This data is also missing the unincorporated areas of at least ten counties in Idaho Power's service area, i.e. Adams, Boise, Camas, Elmore, Gem, Jerome, Lincoln, Payette. Washington and Owyhee.

An additional problem is that the data consists of "permits issued" rather than homes actually completed. The difference between home permits and home completions is sometimes several percentage points. NEEA also uses "permit" data to quantify its goals and achievements, but it uses the U.S. Census as its source. A cursory comparison between Census and Wells Fargo data reveals significant differences between places with reported permits as well as with some of the reported numbers for those places that are on both lists. Idaho Power's actual Energy Star percents shown in the above table for 2005 and 2006 are based on a combination of Wells Fargo and U.S. Census permit data. Using only the Wells Fargo permit data for the denominator, as proposed by Idaho Power, would increase both percentages by about 20%.

If the home-building industry were fairly stable, the differences between permits issued in some, but not all, geographic areas and homes actually completed in all geographic areas might be sufficiently stable so as to allow reasonably fair comparisons of year-to-year changes in Energy Star homes percentages. But the home-building industry is clearly not stable. Construction Monitor data found at <a href="https://www.constructionmonitor.com">www.constructionmonitor.com</a> shows that single-family home permits issued in all of southern Idaho decreased by nearly 70%, from 783 in December 2005 to just 248 in December

2006. Such a significant change in permits issued may also result in a change of the ratio of permits to houses built and both the permit and ratio changes may vary among the geographic areas in and out of the Wells Fargo data. For example, from August 2005 to August 2006, the Wells Fargo data shows new dwelling unit permits decreasing by 40% in southwestern Idaho, while increasing by 6% in southeastern Idaho. Because of the significant, disparate changes the housing industry is experiencing, Staff believes it is unreasonable to use Wells Fargo's incomplete permit data as a surrogate for all homes completed in Idaho Power's service area.

The third difficulty, setting "exceptional" and "poor" achievement levels, is, at best, an arbitrary process. In at least the northwest, Energy Star homes has a short history of not meeting established goals. As a result, for the purposes of the Idaho Power's incentive pilot, Staff ultimately agreed that exceeding the established regional goal of 7.0% Energy Star homes for 2007 would be an "exceptional" achievement, and that falling below 2006's estimated 4.9% (or 3.9%) level would constitute "poor" performance. These thresholds are obviously not symmetrical around the 7.0% "average" performance target, but they seem reasonable given the particular circumstances of this pilot program, especially given the more severe penalty provision of a flat 50% of net benefits lost. Staff notes that if the proposed DSM incentive mechanism were applied to other programs, those would also likely require somewhat arbitrary judgments for "exceptional" and "poor" performance levels.

The fourth difficulty, rewarding or penalizing Idaho Power because of factors unrelated to its Energy Star homes program, is another concern also caused by the rapid decline in home building. Such a radical change in this industry may cause more builders to embrace Energy Star as a competitive way to improve their individual market share, or, alternatively, it may cause more builders to turn away from the higher construction costs of Energy Star homes in an effort to compete on price. We don't yet know which direction most builders will go, but under either scenario, to the extent that Idaho Power's Energy Star homes program success or failure is affected by the overall downturn of the industry, it seems unreasonable to reward or punish the Company for this factor outside its control.

The fifth difficulty, excluding regional Energy Star homes marketing costs and benefits, is caused by the joint nature of Energy Star homes program effort shared by NEEA (of which Idaho Power is an indirect part), Idaho Power directly, and other entities. This would be a lesser problem if we could simply count all of Idaho Power's costs, direct and shared, and all benefits over the life of the homes. But partly due to NEEA's focus on market transformation and future benefits, there

is no good way to allocate near-term benefits to Idaho Power. Thus, the Staff agreed, for the purposes of this pilot, to allow exclusion of Idaho Power's nearly \$200,000 share of NEEA's costs for this program from its potential incentive/penalty calculations. Even assuming that this is a reasonable solution to this problem with the pilot, it does decrease the accuracy of the resulting net benefit calculations. A related problem is that NEEA's Energy Star homes program is another factor that is mostly outside Idaho Power's direct control, but the relative success or failure of NEEA's efforts will affect, to some degree, the success or failure of Idaho Power's program and the amount of the Company's incentive reward or penalty.

The sixth difficulty, calculating the incentive or penalty using an allocation of joint costs based only on heating and cooling degree days, is caused by the fact that more than half of the incremental cost of Energy Star homes is for extra insulation and better windows, which reduce both average and peak electricity and gas demands. Of the \$2,023 average incremental cost per Energy Star home for better insulation and windows, Idaho Power allocated just \$250 or 12% to electricity costs based only on heating degree days versus cooling degree days. While allocations of joint costs are always somewhat arbitrary, this allocation seems especially so because it ignores the benefits due to peak load reductions for electricity versus natural gas. Idaho Power calculates the benefits of Energy Star homes based on time-varying energy and load reductions. Those benefits should not be ignored when allocating costs that are used to determine net benefits.

The seventh difficulty, uncertainties in average savings and base percent of Energy Star homes achieved, are not, by themselves, huge problems, but they do add uncertainty to the range of potential incentive payments or penalties. Idaho Power does not yet have an actual evaluation of energy savings for Energy Star homes in Idaho Power's service area. Idaho Power and NEEA's preliminary working estimates for various northwest climates are presumably reasonable, but these estimates need to be tested by actual measurements specific to Idaho Power's service area. The other uncertainty results from not yet having Wells Fargo housing permit data beyond August of 2006. Thus, the base 4.9% Energy Star homes percent mentioned by Company witness Tim Tatum is estimated based upon interpolated data from Construction Monitor that was extrapolated as an extension to the Wells Fargo data. As previously mentioned, by using a combination of Census and Wells Fargo data, Staff estimates Idaho Power's Energy Star success will be about 3.9% for 2006. Staff agrees with Mr. Tatum that the 2006 percentage, which serves as the penalty base, will need to be recalculated when better data becomes available and after there is agreement on the source(s) of such data.

**CONCLUSION** 

Idaho Power's customers will benefit if more homes are built to Energy Star standards, as

opposed to minimum building code standards. Furthermore, given that 100% of Energy Star homes

are independently inspected, the benefit of Energy Star homes is understated to the extent that not

all non-Energy Star homes meet minimum building code energy efficiency standards. All of the

technical difficulties and uncertainties previously discussed are metrics issues that should remain

negotiable among the Staff, Idaho Power and other parties during the course of the pilot incentive

mechanism. None of the problems by themselves, or even all of them combined, rise to the level of

negating the benefits of cost-effectively building more energy efficient homes. Staff believes that

the proposed incentive mechanism will likely result in more Energy Star homes being built in Idaho

Power's service area than would otherwise have been built.

RECOMMENDATION

Staff recommends that the proposed pilot incentive mechanism be approved, contingent

upon quarterly progress reports being filed by Idaho Power, and a clear understanding that the

pilot's metrics may need to be refined or otherwise modified, or the pilot eliminated, before the end

of the three year trial. Staff expects that such modifications would be presented to the Commission

for its approval before any incentives or penalties are incurred.

Respectfully submitted this

31 day of January 2007.

Scott Woodbury

Deputy Attorney General

Technical Staff: Lynn Anderson

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# **CERTIFICATE OF SERVICE**

I HEREBY CERTIFY THAT I HAVE THIS 31ST DAY OF JANUARY 2007, SERVED THE FOREGOING **COMMENTS OF THE COMMISSION STAFF**, IN CASE NO. IPC-E-06-32, BY MAILING A COPY THEREOF, POSTAGE PREPAID, TO THE FOLLOWING:

BARTON L KLINE MONICA B MOEN IDAHO POWER COMPANY PO BOX 70 BOISE ID 83707-0070 RIC GALE VP – PRICING & REGULATORY IDAHO POWER COMPANY PO BOX 70 BOISE ID 83707-0070

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