# Comments of Demand Response and Advanced Metering Coalition (DRAM)

# To

# Arizona DSM Workshop

# April 14, 2004

## Introduction

The Demand Response and Advanced Metering Coalition (DRAM) is a national organization focused on education and communications related to demand response and its enabling technologies. DRAM welcomes this opportunity to provide input to the Arizona DSM Workshop. We believe demand response is a new area of DSM and not simply a new term for load management, and that it can be an important component of an electricity provider's DSM portfolio. We would welcome an opportunity to appear before the Workshop at one of its upcoming meetings to present these views more fully.

## DSM and Demand Response

In its March 15th Progress Report to the Commission, the Workshop presents the following answer to the question "What is DSM":

*Demand-side management is the planning, implementation, and evaluation of programs to shift peak load to off-peak hours, to reduce peak demand)"kw") and to reduce energy consumption ("kwh") in a cost-effective manner. DSM programs are also known as conservation or energy efficiency programs.*

DRAM views demand side management as a term that describes the many options that a utility or other electricity service provider can use to modify (i.e. manage) the electricity usage of end-use customers as an alternative to increasing supply or delivery infrastructure. The concept behind DSM is to allow a utility to optimize between supply and demand options so that the most cost-effective, timely, and practical mix of the two is achieved.

As such, DRAM views demand response as squarely fitting within the definition of DSM.

Demand response is not simply a new term for load management. It is a new energy area that encompasses traditional load management but which also goes beyond it. Whereas

load management has in the past mainly meant curtailment, interruptible or direct load control programs under the control of the utility and aimed at reliability, demand response also gets the customer involved in making choices. It also includes price reductions and customer bill management as design objectives.

As with any new area, definitions for demand response are still evolving but DRAM offers the following:

*Providing electricity customers with the choice to see price signals and respond to them by reducing and/or shifting usage such that they become both a long range and dynamic resource for addressing pricing, reliability and other issues while allowing the optimization of the planning and operation of the electricity grid and system.*

In demand response, the customer becomes more involved in the decision to modify their electricity usage than in traditional load management. With demand response, the user responds to a price signal upon their choice, yet in a manner which can be relied upon by a utility because the response is predictable as a result of experience (just as customer response to electricity rates has always been assumed in load forecasting, except that the prices change more frequently with demand response). As such it becomes a new tool for the utility to not only manage reliability but also price. It also becomes a new choice for the customer among the many they have for managing and lowering their electricity bill. This is reflected in the inclusion of demand response in the U.S. Energy Information Administration (EIA)'s description of what is included in DSM:

*"It includes technologies that primarily shift all or part of a load from one time-of-day to another and secondarily may have an impact on energy consumption. Examples include space heating and water heating storage systems, cool storage systems, and load limiting devices in energy management systems. This category also includes programs that aggressively promote time-of-use (TOU) rates and other innovative rates such as real time pricing. These rates are intended to reduce consumer bills and shift hours of operation of equipment from on-peak to off-peak periods through the application of time-differentiated rates. "*

Demand response has been shown to not only reduce peak demand but to have an energy conservation effect. That is, not the entire load that is reduced is shifted to another period and an overall usage reduction takes place. This means that demand response also has positive environmental attributes from lowered consumption, in addition to the environmental benefits of peak reduction such as avoiding construction of new peaker plants and reducing use of inefficient, often dirty existing peaker plants.

Energy efficiency through technologies that use less energy to create the same output and deliver the same benefit creates hard-wired savings that for the most part continue on for a number of years. In contrast, demand response programs are a more dynamic option that can provide savings at the flexible discretion of users and utilities by using new metering, communications and controls applications. Also, demand response programs provide a continuous reinforcement of the price incentive. These applications also

provide additional support to energy efficiency and conservation efforts in that they provide new monitoring, measurement and verification opportunities.

Energy efficiency and demand response are similar and complementary but yet respectively unique. The main issue is, however, that each needs to have its own place in a DSM portfolio. Thus it is important that the Arizona DSM Workshop include demand response in its definition of demand side management.

## Policy Outline

DRAM has reviewed the draft outline of the DSM policy statement and sees no components of it that would not apply to demand response. DRAM looks forward to providing input to the statement as it develops so that any unique aspects of demand response are properly addresses.

## DRAM Contact Information

Questions or comments regarding DRAM's comments may be directed to:

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