

LOAD MANAGEMENT

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What is load management?

- Utility load management programs work with customers to reduce electricity use at critical times, such as peak periods or during system emergencies.

Features of Load Management

- Customers receive incentives in the form of rate discounts or direct payments.
- Utilities pay incentives as a fraction of the cost to invest in more electric generators or buy peak electricity, saving the utility and its customers the expense of adding capacity or buying on the wholesale market.
- Large customers voluntarily determine how much of their electricity usage can be switched off.

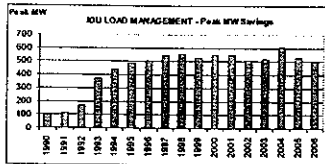
Features (cont.)

- Large customers are given several levels of advance notice and agree to test their electricity reduction systems annually.
- Utilities may charge penalties to large customers who do not carry out interruptions.
- Some programs have "buy-through" options for large customers.

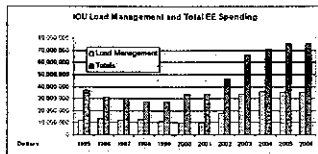
History of Load Management

- Investor owned utilities (IOUs) implemented some load management prior to 1990.
- The IOUs expanded load management in the early 1990s to address the need for peak-load electric capacity.
- In recent years, the IOUs have focused on maintaining load management capabilities.

Cumulative Amounts of Load Management



Costs of IOU Load Management



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Participation

Who is participating in the utility programs?

- Large nonresidential customers participate in interruptible programs.
- Residential customers can participate in direct load control programs such as air conditioner cycling.

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Future Load Management Efforts Alliant/IPL

- IPL currently offers residential direct load control and nonresidential interruptible rates.
- At the end of 2007, IPL had approximately 272 MW of load management available between the two programs.
- IPL intends to continue existing programs and expand their enrollments.

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Future Load Management Efforts MidAmerican Energy

- MEC offers financial incentives to residential customers in exchange for allowing MEC to control their central air conditioning.
- The nonresidential program provides large nonresidential customers with financial incentives to reduce demand during system peak hours.

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Savings

- IPL expects the MW savings for its program to increase at a steady rate of slightly under 2 percent annually from 282 MW in 2009 to 309 MW in 2013.
- MidAmerican projects that peak MW savings for its programs to increase from 216 MW in 2009 to 236 MW in 2013.

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Other Load Management Methods Rate Design

- Retail rates are also used to encourage energy efficiency and manage load.
- The most commonly used rate designs for this purpose is some type of time of use (TOU) rate or dynamic rates.

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Time of Use Rates

- Time of use rates establish charges that vary by season or time of day.
- Seasonal rates are used by MidAmerican and IPL for all of their customers.
- Other time of use rates are used on a voluntary basis for residential customers and on a mandatory basis for large commercial and industrial customers.

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Dynamic Pricing

- Dynamic pricing is a type of rate where the utility can change the cost or availability of power with limited or no notice.
- The two most common types of dynamic pricing are real-time pricing and critical peak pricing.

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Critical Peak Pricing MidAmerican

- MidAmerican is proposing a critical peak pricing program designed to test the key features of new demand response strategies in their service territory.
- The pilot program will be offered to residential customers in a limited geographical area.

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**Critical Peak
Pricing/MidAmerican (cont)**

- The program will rely on a mix of education, pricing and technology strategies to help customers better manage their usage.
- Prices will be highest during a small number of summer afternoons (peak periods).
- During off-peak periods, prices for participants will be lower than those of standard tariffs.

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