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## Fact Sheet No. 3:

### Why Have a Capacity Market?

#### *What is a capacity market in electricity?*

In competitive markets, for most products, consumers can easily decrease their demand in response to prices and other market signals. There is no need for extra capacity to meet peak demands, because prices give consumers the right signals when supplies are tight. Regulatory controls in New England, however, limit electricity prices in New England, so these price signals are not effective. For this reason, and because the economic consequences of running out of electric generating capacity are severe, market rules have been put in place to create a market for generating capacity. This capacity market helps the grid operator ensure that sufficient generating capacity will be available to meet high peak loads.

Under the New England wholesale market rules, each retail supplier is required to bear its share of the responsibility for making sure there is sufficient generating capacity in the region. Generators that meet certain standards of availability are allowed to sell entitlements in their capacity, and retail suppliers can purchase these entitlements to meet their requirements. Retail suppliers can also purchase capacity on the spot market run by ISO New England, which is also the grid operator for the region.

#### *Why should New England have a market for generating capacity at all?*

In New England we have an hourly spot market for electricity. So why do we need a capacity market too? In the wholesale energy market, generators bid to generate and are paid the hourly price for power if they do. This covers the cost of the fuel used to generate the power and some other operating costs. For some generators with low operating costs, these energy revenues also help compensate for their higher initial costs. But in general, in part due to regulatory controls on both the retail and wholesale energy market prices, the energy revenues of power plants will not be high enough to cover the fixed costs of keeping generators available and for making the original capital investment. The highest-cost peaking generators cannot hope to recover their investment only from these energy revenues, just as an airline could not avoid bankruptcy if it priced all its tickets solely on the cost of the fuel.

Covering fixed costs in electricity is even harder than in the airline business. Since power cannot be stored, there has to be significant extra capacity available to meet peaks in demand, because some generators will not be available due to outages and maintenance. To stay reliable, a power system has to have this built-in "reserve margin" to protect reliability. Some payment is necessary for the costs of the extra plants that are required to run, which is very infrequently, if at all.



Revenues in the energy market will not cover the costs of this extra reserve margin, especially with prices subject to various regulatory controls. The New England grid operator has estimated, for example, that an efficient combined-cycle generator would have covered only 50% of its total costs in 2004 by running in the energy market. To ensure that generators have the incentive and ability to keep adequate generation available, New England, like many power markets, has a separate capacity market. The capacity market payments reflect the costs of keeping sufficient capacity (plus the reserve) ready and available to the region — they represent the option to call on generators as and when needed.

***Should capacity prices differ across New England?***

Capacity prices in New England should vary across the region for the same reason that house prices do — the supply and demand for housing varies by location just as the supply and demand for generating capacity does.

Some areas within New England (such as Connecticut and the Boston area) have a shortage of capacity as compared to other regions. Since the need in those areas is higher, it makes sense that the price of capacity there is higher as well, to give investors incentives to build in those locations. These capacity-short areas also tend to be densely populated (e.g., metro Boston and the suburbs of southwest Connecticut), so the costs of building new generation there are higher too — especially when the high costs of environmental compliance are factored in. So it makes sense that capacity prices may be higher in these areas — prices must ultimately reflect demand and costs if an adequate supply of electricity in these regions is to be maintained.