Lessons from 3.11

Perspectives for Japan’s Energy Policy

Hiroshi TAKAHASHI, Ph.D.
Takahashi-97@jp.fujitsu.com
Research Fellow, Fujitsu Research Institute
Closed Japanese Power Market

10 General Electric Power Suppliers
- Vertical Integration
  - generate
  - transmit
  - distribute

Regional Monopoly

Small-size Consumers: Households / Small Offices

Large-size Consumers: Office Buildings/Factories

>> Stable Supply / High Electricity Tariff

PPS

Specified Power Producer

JEPX

In-House Generation

10.6%
1.7%
1.8%
2 Causes of Planned Outage

〈TEPCO’s Power Source Mix〉

![Diagram showing power sources and their capacities]

- Heavy dependence on centralized generation

〈Power Interchange across Regions〉

<table>
<thead>
<tr>
<th>Interchange Type</th>
<th>Interchange Capacity</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Across Regions in Japan</td>
<td>51TWh</td>
<td>5.2%</td>
</tr>
<tr>
<td>Across Nations on EU Continent</td>
<td>285TWh</td>
<td>11.0%</td>
</tr>
</tbody>
</table>

Source: ENTSO–e, Agency for Natural Resources and Energy
"Forced" Demand Response

< Daily Peak Load in TEPCO’s Business Area >

2010: 49.73GW on an Average

2011: 41.19GW on an Average

Peak Load: 17.2% Lower
(Highest Temperature: 0.4°C lower)

Source: TEPCO's Website