Demand–Side Management of KEPCO

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I. KEPCO Overview

1. History

- **January 26, 1898**
  Hansung Electric Company founded

- **July 1, 1961**
  Korea Electric Company (KECO) established

- **August 10, 1989**
  KEPCO listed on the Korea Stock Exchange

- **January 1, 1982**
  Renamed as Korea Electric Power Corporation (KEPCO)

- **January 3, 1998**
  The 100th anniversary of Korea’s electric power business

- **April 2, 2001**
  The power generation unit divided into six subsidiaries

- **October 27, 1994**
  KEPCO listed on the New York Stock Exchange (NYSE)
1. KEPCO Overview (continued)

2. Overview

- **Assets**: $73.8 billion (USD)
- **Offices**: 254 (Head, Primary, Secondary Offices)
- **Affiliated Companies**: 17 (Including 6 Generating Companies)
- **Employees**: 20,209

**KEPCO**

- **Generation** (96%*)
  - (6 Subsidiaries)
- **Transmission**: 100%
- **Distribution**: 100%
II. Power Supply & Demand

1. Load Curve (’01 ~ ’06)

Peak Load expected to increase 1.8% annually until 2020
Power Sales expected to increase 2.5% annually until 2020
II. Power Supply & Demand (continued)

2. Load Factor

- Maintained high load factor over 70% through various D
III. Outlines of KEPCO’s DSM

1. Structure of DSM Implementation

- Government (Ministry of Commerce, Industry and Energy)
- Yearly Plan
- Policy
- Electric Power Infrastructure Center (Fund Management)
- Program Implementation
- Evaluation
- Participation
- DSM Customers
- KEPCO
- All Customers
- Payment
- Incentives
III. Outlines of KEPCO’s DSM (continued)

2. Categories of DSM Programs

- Load Management Programs
- Energy Efficiency Programs
III. Outlines of KEPCO’s DSM (continued)

Load Management Programs

- Load Reduction
- Load Shift
- Valley Filling

Efficient use of Power Facilities

Stable Power Supply

Decreased Investment for Power Facilities
III. Outlines of KEPCO’s DSM (continued)

Load Management Programs

- Adjusting Vacation/Maintenance Schedules
- Voluntary Load Reduction during Summer Afternoon Peak Hours

- Cool Storage System
- Remotely Controlled Air-Conditioners

- TOU(Time of Use) tariffs
- Night Thermal-Storage Power Service
III. Outlines of KEPCO’s DSM (continued)

- Energy Efficiency Programs
  - Usage of Energy-Efficient Devices
  - Increasing Energy Efficiency
  - Energy Saving
  - Peak Load Reduction
III. Outlines of KEPCO’s DSM (continued)

Energy Efficiency Programs

- Energy-Efficient Lighting • Inverters • Motors • Transformers
- Smart Vending Machines

- Progressive Rate System
- Energy Welfare Program
- Energy Saving Campaign
### Results of DSM Program

<table>
<thead>
<tr>
<th>Programs</th>
<th>Results in 2006</th>
<th>Accumulated</th>
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<tbody>
<tr>
<td></td>
<td>MW</td>
<td>Peak Clipping</td>
</tr>
<tr>
<td>*Adjusting Vacation/Maintenance Schedules</td>
<td>2,054</td>
<td>1,608</td>
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<tr>
<td>*Voluntary Electricity Conservation</td>
<td>1,564</td>
<td>995</td>
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<tr>
<td>*Cool Storage System</td>
<td>77</td>
<td>58</td>
</tr>
<tr>
<td>*Remotely Controlled Air Conditioner</td>
<td>36</td>
<td>16</td>
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<tr>
<td>*Energy-Efficient Lighting</td>
<td>64</td>
<td>61</td>
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<tr>
<td>*Inverters for Improving Motor Efficiency</td>
<td>80</td>
<td>53</td>
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<tr>
<td>*Others</td>
<td>11</td>
<td>8</td>
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<tr>
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<td>3,886</td>
<td>2,799</td>
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IV. Solid Performance of KEPCO’s DSM

World Best Accomplishments

- **Load Factor**
  - World’s highest level 76.2% (2005)
  - Improved 3.9% by DSM

- **Peak Reduction**
  - 2,971MW (2005)
  - 2,799MW (2006)

- **Diversity Of DSM Programs**
  - 15 DSM programs
  - Introduced 2 new programs in 2006
  - Various R&D activities

Customer Satisfaction

- 8 consecutive yr #1 in customer satisfaction survey

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Thank You