H.E. Mr. Abdulkarim I. Al Arhabi  
Deputy Prime Minister for Economic Affairs and  
Minister of Planning and International Cooperation  
Ministry of Planning and International Cooperation  
Sana’a, Republic of Yemen

Re: Credit No. 4172-YEM  
Power Sector Project  
Amendment to the Development Credit Agreement

Excellency:

We refer to the Development Credit Agreement (Power Sector Project) between the Republic of Yemen (the Borrower) and the International Development Association (the Association) dated July 11, 2006 (the Development Credit Agreement). We also refer to the Aide Memoire dated June 12, 2010, in which the Association and the Borrower discussed and agreed to certain changes to the Power Sector Project.

Accordingly, pursuant to these agreements, the Development Credit Agreement is hereby amended as follows:

1. Section 2.03 of the Development Credit Agreement is amended as follows:

   “Section 2.03. The Closing Date shall be December 31, 2014, or such later date as the Association shall establish. The Association shall promptly notify the Borrower of such later date.”

2. The table at paragraph 1 of Schedule 1 to the Development Credit Agreement is amended to read as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount of the Credit Allocated (Expressed in SDR Equivalent)</th>
<th>% of Expenditures to be Financed</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Works</td>
<td>25,390,000</td>
<td>70%</td>
</tr>
<tr>
<td>(2) Goods</td>
<td>4,400,000</td>
<td>100%</td>
</tr>
</tbody>
</table>
3. Schedule 2 to the Development Credit Agreement is amended to read as follows:

“SCHEDULE 2

Description of the Project

The objective of the Project is to increase electricity supply and delivery in an efficient manner.

The Project consists of the following parts, subject to such modifications thereof as the Borrower and the Association may agree upon from time to time to achieve such objectives:

Part A: Power System Strengthening and Efficiency Improvement

1. Design, supply and installation of a 250-ton per hour boiler at Al-Hiswa power station through the carrying out of works and the provision of technical advisory services.

2. Design, supply and installation of: (a) new transmission lines, new sub-stations, expansion and upgrading of existing sub-stations in Hodeidah area and related inter connected systems; and (b) new transmission lines, new sub-stations, expansion of existing sub-stations in Dhamar area and related inter connected systems through the carrying out of works and the provision of technical advisory services.

3. Supply of: (a) aluminium and copper conductors; (b) underground cables and fittings; (c) overhead line hardware; (d) distribution transformers and compact substations; (e) switchgears, lightning arrestors and fuses; (f) wooden poles; and (g) 33/11-kV substations, all to selected sites for installation in demarcated governorates through the carrying out of works and the provision of goods and technical advisory services.
4. Supply of meters, power system analyzers and reactive compensation equipment to reduce energy losses.

**Part B: Capacity Building and Sector Reform**

1. Conducting a loss reduction study and an energy audit of the nationwide distribution system through the provision of technical advisory services.

2. Improving the financial management and audit control of PEC including inventory management through the provision of technical advisory services.

3. Carrying out a tariff strategy assessment taking into consideration the impact of possible changes in the tariff structure on the poor through the provision of technical advisory services.

4. Assisting in the implementation of the sector reform program through the provision of technical advisory services and training.

5. Updating the electricity master plan through the provision of technical advisory services.

4. The attachment to Supplemental Letter 2 is hereby replaced by the attachment hereto.

All the terms and conditions of the Development Credit Agreement that have not been amended hereby shall remain unchanged and in full force and effect.

Please confirm your agreement with the foregoing by signing and dating the confirmation on the enclosed copy of this Amendment to the Development Credit Agreement and returning it to the Association.

Sincerely,

INTERNATIONAL DEVELOPMENT ASSOCIATION

By: /s/ A. David Craig  
Director  
Yemen, Egypt and Djibouti Country Department  
Middle East and North Africa Region

AGREED AND CONFIRMED:

**REPUBLIC OF YEMEN**

By: /s/ Abdulkarim I. Al-Arhabi  
Deputy Prime Minister for Economic Affairs and Minister of Planning and International Cooperation  
Date: March 23, 2011
### Results Framework

**Project Development Objective:** Increase electricity supply and delivery in an efficient manner.

<table>
<thead>
<tr>
<th>PDO Level Results Indicators*</th>
<th>Core</th>
<th>D=Dropped</th>
<th>C=Continue</th>
<th>N=New</th>
<th>R=Revised</th>
<th>Unit of Measure</th>
<th>Baseline (2010)</th>
<th>Cumulative Target Values**</th>
<th>Frequency</th>
<th>Data Source/Methodology</th>
<th>Responsibility for Data Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator One: Supply/Generation</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gram</td>
<td>380</td>
<td>0 0 0 300 300</td>
<td>PMU Quarterly report.</td>
<td>PMU Quarterly Reports</td>
<td>PEC/PMU</td>
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<td>HFO/kwh</td>
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<td></td>
<td>Measurement at power plant</td>
<td>PEC Annual Reports</td>
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<tr>
<td>Indicator Two: Supply/Generation:</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GWH/year</td>
<td>0</td>
<td>0 0 900 1800 1800</td>
<td>PMU Quarterly report.</td>
<td>PMU Quarterly Reports</td>
<td>PEC/PMU</td>
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<td>Measurement at power plant</td>
<td>PEC Annual Reports</td>
<td></td>
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<tr>
<td>Indicator Three: Transmission Delivery</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MWH/year</td>
<td>0</td>
<td>0 0 0 750 1000</td>
<td>PMU Quarterly report.</td>
<td>PMU Quarterly Reports</td>
<td>PEC/PMU</td>
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<td>Measurements at substations</td>
<td>PEC Annual Reports</td>
<td></td>
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<tr>
<td>Indicator Four: Distribution Delivery</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Percent (%)</td>
<td>19</td>
<td>0 0 18 17 16</td>
<td>PMU Quarterly report.</td>
<td>PMU Quarterly Reports</td>
<td>PEC/PMU</td>
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<td>Fault reports</td>
<td>PEC/PMU</td>
<td></td>
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</tbody>
</table>

* PDO Level Results Indicators:
  - Core
  - D=Dropped
  - C=Continue
  - N=New
  - R=Revised

**Cumulative Target Values**
- YR 1
- YR 2
- YR 3
- YR 4
- YR 5

**Frequency**
- PMU Quarterly report.
- PEC Annual Reports
- Measurement at power plant
INTERMEDIATE RESULTS

Intermediate Result (Component One):

(a) **Generation**: Increased generation and efficiency at Al-Hiswa
(b) **Transmission**: Facilitate transmission of power, mainly from Marib power plant, through Dhamar - Hizyaz and Hodeidah – Kilo transmission facilities.
(c) **Distribution**: Strengthening/ reinforcing of distribution system
(d) **Loss Reduction**: Efficiency improvement through metering and reactive compensation
(e) **Pilot Schemes**: Facilitating better management of electricity use by poor households

Revised Intermediate Result (Component One):

(a) **Generation**: Increased efficient generation capacity at Al-Hiswa
(b) **Transmission**: Increased/strengthened transmission capacity to evacuate power from Marib
(c) **Distribution**: Strengthened/ reinforced of distribution system

<table>
<thead>
<tr>
<th>Intermediate Result indicator</th>
<th>C</th>
<th>270 boiler</th>
<th>Site survey</th>
<th>Construction start</th>
<th>Installed and operational</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>One</strong>: Generation</td>
<td></td>
<td>270 boiler</td>
<td>Site survey</td>
<td>Construction start</td>
<td>Installed and operational</td>
</tr>
</tbody>
</table>
Intermediate Result indicator

Two: Transmission
A total of 108 km 132 kV transmission lines constructed and operational, 2 new 132 kV substations built, and 2 existing 132 kV substations rehabilitated

| C | (a) 108 km 132 kV lines installed | (a) Lines not constructed | Constructed and operational |
| C | (b) Two 132 kV substations built | (b) Substations not built | Constructed and operational |
| C | (c) Two 132 kV substations rehabilitated | (c) Substations not rehabilitated | Rehabilitated |

Intermediate Result indicator

Three: Distribution
Reinforcement of distribution network in 18 governorates completed

| C | NA | Construction on-going | Partly completed | Fully completed |

Intermediate Result (Component Two):

(a) Loss Reduction/Energy Audit study
(b) Tariff Strategy Assessment
(c) Financial management and audit control study
(d) Inventory Management Study

**Revised Intermediate Result (Component Two):**

(a) Loss Reduction/Energy Audit study
(b) Tariff Strategy Assessment
(c) Financial management and audit control study
(d) Updated Master Plan Study
(e) Sector Reform Support

<table>
<thead>
<tr>
<th>Intermediate Result indicator</th>
<th>One: Loss Reduction/Energy Audit study complete</th>
<th>C</th>
<th>Study</th>
<th>Done</th>
<th>NA</th>
<th>NA</th>
<th>NA</th>
<th>Final reports PMU quarterly progress report</th>
<th>Distribution department of PEC</th>
<th>PMU through consultant</th>
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</thead>
<tbody>
<tr>
<td>Intermediate Result indicator</td>
<td>Two: Tariff Strategy Assessment complete</td>
<td>C</td>
<td>Study</td>
<td>No study</td>
<td>Study starts</td>
<td>Study complete</td>
<td>Impl. Initiated if needed</td>
<td>Final reports PMU quarterly progress report</td>
<td>PEC</td>
<td>PMU through consultant</td>
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<tr>
<td>Intermediate Result indicator</td>
<td>Three: Financial management and audit</td>
<td>C</td>
<td>Study</td>
<td>Phase I done</td>
<td>Phase II starts</td>
<td>Study complete</td>
<td>Impl. Initiated if needed</td>
<td>Final reports PMU quarterly progress report</td>
<td>Finance department of PEC</td>
<td>PMU through consultant</td>
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<td>Intermediate Result indicator</td>
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<td>Four: Updated Master Plan</td>
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<td>Study</td>
<td>No study</td>
<td>Study starts</td>
<td>Study complete</td>
<td>Impl. Initiated if needed</td>
<td>Final reports PMU quarterly progress report</td>
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<td>Study complete</td>
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<td>Planning department of PEC</td>
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<td>Intermediate Result indicator</td>
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<td>Advisors and consultants hired</td>
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<td>PMU through consultant</td>
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<td>Five: Sector reform support provided</td>
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<td>Reform Office of MOEE</td>
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<td>Support continue</td>
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<td>PMU through consultant</td>
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<td>Intermediate Result indicator</td>
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<td>Six: Inventory Management</td>
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<td>Combined</td>
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<td>Study</td>
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*Please indicate whether the indicator is a Core Sector Indicator (see further http://coreindicators).

**Target values should be entered for the years data will be available, not necessarily annually.