1. Key development issues and rationale for Bank involvement

Under the Kyoto Protocol, industrialized countries have committed to reduce their greenhouse gas emissions (GHG) during 2008–12. Emission reduction commitments are defined as a cap on the volume of greenhouse gases (GHGs) that can be emitted and are quantified by Assigned Amount Units (AAUs) allocated to each participating industrial country and economies in transition (EIT). While many of the EU-15, Japan and other industrialized countries will not be able to meet their Kyoto commitments, a number of EITs, including the Czech Republic, are expected to be left with significant surplus AAUs after meeting their Kyoto commitments, presenting trading opportunities under Article 17 – International Emissions Trading.

Some countries (e.g., the Netherlands, Spain, Japan) have confirmed potential interest in acquiring AAUs. These potential buyers have also indicated that support from their domestic constituencies for buying surplus AAUs could be secured only if the proceeds from AAU transactions are used for projects or programs that reduce GHG emissions or have other tangible environmental benefits. Some EITs have proposed establishing a 'Green Investment Scheme' (GIS) to satisfy potential buyers’ concerns that AAU proceeds be channeled to prior-identified projects and programs that yield environmental benefits.

The World Bank Carbon Finance Unit (CFU) uses money contributed by governments and companies in OECD countries to purchase GHG emission reductions in developing countries, and emission reductions and AAUs in EITs. The units are purchased through one of the CFU’s carbon funds on behalf of the contributor.

Under the Kyoto Protocol, the Czech Republic is entitled to emit a total of 900 mln tons of GHG during the period 2008-1012. The country could sell around 100 million AAUs to countries that are unable to meet their Kyoto commitments. The GIS is proposed to link AAUs with specific programs/projects. The draft GIS program prepared by the Ministry of Environment (MoE) reflects government priorities, relating primarily to energy savings in the housing sector. The proposed measures that should be supported by the GIS will cover those national priorities in environmental protection and increased energy savings.
2. Proposed Objectives

The main objective of the proposed project is to reduce CO2 emissions and air pollutants, to increase the use of renewable energy sources and to improve energy efficiency in the residential sector of the Czech Republic.

3. Rationale for Bank Involvement

Support for the Czech Republic’s Green Investment Scheme activities through the purchase of AAUs is well aligned with the Bank’s overall strategy in the energy, environment and climate change areas. The Bank’s relevant policies are articulated in the framework documents on ‘Development and Climate Change: a Strategic Framework for the World Bank Group’, ‘Clean Energy and Development: Towards an Investment Framework’, Renewable Energy and Energy Efficiency Action Plan and Environment Strategy Concept Note.

As the complex confluence of inclusive economic growth and climate change action has become one of the most pressing issues in international development, the problems and challenges of energy policy and climate change are high on the Bank’s strategic agenda.

4. Description

The proposed areas of support primarily include energy saving and energy efficiency investments in the country’s housing sector and include: (a) heat insulation of family and apartment buildings; (b) improving energy efficiency by replacing existing equipment with equipment with higher energy efficiency; (c) fuel switch to more environmentally friendly fuels (e.g., switch from coal to renewable energy) and installation of bio-fuel burners; (d) installation of low-emission biomass sources; (e) installation of solar thermal collectors in family houses and apartment buildings and (f) installation of heat pumps, some types of which require installation of equipment in boreholes.

5. Tentative Financing

Source: ($m.)

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrower</td>
<td>30</td>
</tr>
<tr>
<td>Carbon Fund</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

6. Implementation

While the Ministry of Environment is responsible for GIS/AAUs, practical implementation is handled by the State Environmental Fund (SEF) through its headquarters and 14 regional branches, and selected commercial banks.

SEF is a public entity having about 300 employees and established to administer: (i) national environmental programs financed from sources received as a result of enforcement of environmental legislation; and (ii) funds assigned under the Priority ‘Environmental Infrastructure Improvement’ of EU Operational Program (OP) ‘Infrastructure’ (including Energy efficiency measures in public and municipal sectors and development of renewable energy sources).

Because of its administration of the above funds SEF has gained considerable experience in implementing investment projects with profiles similar to those to be financed by the GIS Program. SEF has established
a network of regional branches with a branch in each region. It also has well-established transparent and efficient project application procedures. SEF has processed more than 1,200 projects in 2007-2008 for funding from EU structural funds. Reportedly, OP ‘Environment’ has one of the quickest take-offs compared to other OPs.

Around thirty staff are hired in the SEF’s GIS Implementation Department and additional staff have been designated in each of its 14 regional branch offices to implement GIS program (total of 100 staff).

**Commercial banks:** Initial screening of applications is being handled by five competitively selected commercial banks with 1,200 branches nationwide. This ensures that applicants have easy access to a branch no matter where they live. Most of the commercial banks have reportedly significant experience in making loans for energy efficiency investments and housing renovations and in addition to administering the GIS Program, might assist project applicants with co-financing.

7. **Sustainability**

For middle income countries like the Czech Republic, energy demand will increasingly require support for low carbon development strategies, including a strong focus on energy efficiency and renewable technologies. These countries are looking to sustain growth through efficient energy services. Investments leading to low-carbon development are means to balance growth with energy security and environmental sustainability.

8. **Lessons Learned from Past Operations in the Country/Sector**

Examples of successful energy efficiency projects in building sector in the region have shown the importance not just of a grant but of upfront (free) TA to help raise awareness, for marketing, to identify opportunities and projects and appraise projects etc. Also, and particularly for energy efficiency investments in residential sector, it is crucial that application procedures are not overly complex, and technical support is provided to applicants. These elements were strongly reiterated during the project preparation.

9. **Safeguard Policies (including public consultation)**

<table>
<thead>
<tr>
<th>Safeguard Policies Triggered by the Project</th>
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<th>No</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental Assessment (OP/BP 4.01)</strong></td>
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<td>Natural Habitats (OP/BP 4.04)</td>
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<td>Pest Management (OP 4.09)</td>
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<td>Involuntary Resettlement (OP/BP 4.12)</td>
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<td>Indigenous Peoples (OP/BP 4.10)</td>
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<td>Projects in Disputed Areas (OP/BP 7.60)</td>
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<td>Projects on International Waterways (OP/BP 7.50)</td>
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<td></td>
</tr>
<tr>
<td>Piloting the Use of Borrower Systems to Address Environmental and Social Issues in Bank-Supported Projects (OP/BP 4.00)</td>
<td>[ ]</td>
<td>[X]</td>
<td></td>
</tr>
</tbody>
</table>

According to the World Bank’s OP/BP/GP 4.01 Environmental Assessment, the CZ GIS is classified as “FI” Category, which applies to all proposed projects that involve investment of Bank funds through a financial intermediary (FI). Commonly the specific environmental impacts of the subprojects cannot be determined before appraisal of the project. Investments in energy saving and energy efficiency

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*By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas*
investments in the country’s housing sector, including new passive family houses and apartment buildings, are not expected to cause significant adverse environmental and social impacts and to be located in protected areas, critical habitats or culturally or socially sensitive areas. However, potential adverse environmental impacts might include: (a) dust and noise due to the demolition and construction; (b) unregulated disposal of demolition and construction wastes, accidental spillage of machine oil, lubricants, etc; (c) pollution and/or changes of hydrological regime of the ground waters due to the impacts of heat pumps operating within deep strata of ground water; (d) installations of biomass burners might cause pressures on fuel wood or other biomass markets and put strain on biomass sources (e.g. in extreme cases leading to deforestation). All these potential environmental impacts were investigated within an environmental management framework (EMF) and found to carry only minor risks, either due to a small magnitude of the expected consequences, or due to a very low probability of their occurrence. Overall they were found to be easily manageable and mitigable during the project implementation.

Overall the GIS activities will create positive environmental impacts related to reduction of greenhouse gas emissions. Furthermore, the Project is expected to have positive social impacts: The upgrading of existing or construction of new residential houses and buildings will improve quality of life for the population, especially in rural areas and small towns, and would contribute to reduction of air polluting emissions, especially SO$_2$ and PM$_{10}$, and greenhouse gases.

10. List of Factual Technical Documents

Carbon Finance Assessment Memorandum
Project Idea Note
Monitoring Framework

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