

### BASE

#### **B**aselines for **A**ccession **S**tates in **Europe**

### SLOVENIA National Electricity Sector Baseline

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# **Background in SLOVENIA**

- The UNFCCC focal point in Slovenia is the Ministry of the Environment and Spatial planning (Environmental Agency), who are also responsible for national reporting
- The Framework for JI in Slovenia is still in its initial stage because
  there have been no JI projects
- Draft national criteria for JI projects have been prepared through the BASE project
- A new Working group "JI/CDM Expert group" has been established by the Ministry of the Environment and Spatial Planning
- The baseline scenario for Slovenia has been done
- The national short term and long term electricity plan is made by electricity sector model
- No baseline methodologies have been applied in Slovenia until now
- There are currently no requirements for baseline development.

## **Government Preferences**

- Slovene government have no experience in JI projects and baseline definition until now
- Government does not have any specific requirements for baseline definition
- Key national stakeholders on JI have quite a lot of interest, mainly as investors
- Government is keen to apply the additionality rule strictly in that projects have to prove that they would not have happened without ERU's
- The most likely project types to be implemented under JI in Slovenia are: energy efficiency projects, projects of switching to renewable energy, energy saving projects and CHP and district heating reconstruction projects.

## **Model Selection**

- In Slovenia the reference energy model MESAP is used in combination with the electricity sector optimisation model ELBIVIM,
- Compared to other models, MESAP with ELBIVIM has proven to be most adequate for small and specific power systems of the Slovenian type.
- The model is already used for many years
- The model is used by the Ministry of Environment, Energy office and by power plants.
- The model has been used in the definition of the National energy strategy, least cost developments plans and the National Communication
- Capabilities are quite the same in comparison with other methodologies and the other requirements. A question could be calculation of CO<sub>2</sub> emissions by plant and by technology

# **Methodology Selection**

- The Slovene Government has selected the average emissions rate of the electricity sector as an acceptable methodology and in principal hydro and nuclear may be excluded
- The main reason why this methodology was chosen is because Slovenia is a small and specific power systems.
- The data for this methodology are available

# **Overview of Electricity Sector**

#### Structure of supply side

Installed Capacities of PPs in Slovenia

- Thermal 39%
  Hydro 31%
  Nuclear 26%
- Rest 5%
- Ownership: All PPs are state owned, except small HP and wood biomass CHP
- The energy transmission network belongs to the state-owned company.
- **Main energy policy**: The main goal of energy policy is to provide high quality and stable energy supply for consumers with the optimum prices and with minimised environmental impact.

# **Overview of Electricity Sector**

- The market structure for electricity: Regulator on the partly liberalised Energy Sector is Energy Agency, established at the beginning of year 2001
- Internal market was opened in April 2001
- External market was partly opened in January 2003.
- Electricity prices are regulated; all changes in pricing have to be approved by the Energy Agency.
- On the **supply side** can participate all PP producers, if fulfilled the certain conditions and obtained the special production licence from the Energy Agency.
- The national energy plan (NEP) is prepared, but not yet adopted by the Slovene government.
- A part of the National energy plan is also National electricity plan, National renewable strategy with targets and a National CHP strategy.

### **Baseline Scenario**

- In the scenario are included:
  - Planned closures and investments
  - Technology evolution in electric sector
  - Least cost developments plans
  - The national energy strategy
  - The national climate change strategy
  - National environmental requirements
  - European accession requirements
    - Agreed renewable target (5%)
  - National development plans

### **Baseline Projections**

#### **Installed Capacity (MW)**

| Plant/<br>Technol | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| œy                |       |       |       |       |       |       |       |       |       |       |       |
| Hydro<br>PP       | 825   | 825   | 825   | 83    | 858   | 858   | 876   | 919   | 919   | 925   | 965   |
| Thermal<br>PP     | 1.142 | 1.142 | 1.142 | 1.142 | 1.142 | 1.142 | 1.142 | 1.142 | 1.142 | 1.142 | 1.142 |
| Nudeer<br>PP      | 674   | 674   | 674   | 674   | 674   | 674   | 674   | 674   | 674   | 674   | 674   |

### **Baseline Projections**

**Baseline Emissions Factors (tCO<sub>2</sub>/GWh)** 

These factors are not official yet. This is a first draft and will be checked once again and corrected

| 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------|------|------|------|------|------|------|------|------|------|------|
| 405  | 407  | 412  | 408  | 397  | 395  | 392  | 384  | 380  | 376  | 376  |



### Validity and Update of Baseline

- The baseline will be fixed, but the period is yet to be decided
- Baseline revisions should be made when significant new investments or closures take place or when there are significant changes in fuel and energy prices
- The Slovene government should update the baseline for their own purposes every four years.
- The Ministry for the Environment, Spatial planning and Energy is responsible for the baseline and for the update of the baseline
- On the Ministry level they have agreed with the proposed baseline
- Difficulties: When the Baseline Emissions Factors will be calculated, could happen the discussion between different sectors