

# ***NIB Nordic Investment Bank NIB***

**in co-operation with**

**BASREC, Swedish and Finnish Government**

## **Financing Instruments and Co-projects Street Lighting and CHP**

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# Background for Street Lighting Study

- **The EU has adopted the Directive of Ecodesign of Energy-Related Products (Directive 2009/125/EC)**
  - The mercury vapour (MV) lamps and retrofit high pressure sodium (HPS) lamps, which are commonly used in road lighting will be phased out from the European markets by April 2015.
- **Russia, Presidential Decree, dated March 23, 2010**
  - Enhancement of Energy Efficiency in the Russian Federation” makes provision for light bulbs which produce up to 25 watt to be replaced on a step-by-step basis by 2014.

# Key Questions Street Lighting?

- Will the new technologies be developed enough and reliable in the coming few years?
- No existing satisfactory EU or internationally accepted standards for outdoor lighting such as the DALI standard (i.e. Digital Addressable Lighting Interface (DALI) for buildings.
- Should steering systems be modernized at same time?
- How to reduce risk for project failures?
- How to time investments to match installation supply capacity – risk for over heating and price escalation
- Implementation models – strengths and weakness?

# Organising Street Lighting Study

- **Basrec**
  - Covering the whole Baltic Sea Region
- **Financing**
  - Swedish Government
  - Finnish Government
- **Execution Agency**
  - NIB
- **Consultants**
  - ÅF: Steering systems, Financing and Implementation Models
  - Motiva: LED and other Light technologies

# Next steps – street lighting?

- **Handbook for Stakeholders**
  - June 2014
- **How to reach Stakeholders**
  - BASREC
  - Seminars
  - Exchange of information/Positive and Negative
    - Internet Portals
    - EU-level
    - BSR region/
    - Stakeholder organisations
      - municipality and road organisations, UBC Baltic Cities

# **NIB financing of Street Lighting and CHP projects**

- **Street lighting projects**
  - EUR 20/40 million for completed modernisation of Lighting and Steering Systems in major cities
  - Smaller projects in smaller cities and rural areas
  - Motorways and state structures
  - Large Public/Private Structures
    - Business and Commercial Buildings
    - Parks and Sports halls etc.
    - Other

# Implementation/Procurement/Financing

- **Implementation model**

- Public Procurement step by step
- Public Procurement Total implementation
- PPP/Total implementation/Step by step

- **Financing**

- Separate public financing
- ESCO-model
- PPP financing

# NIB Mission and Mandate

NIB promotes sustainable growth of its member countries by providing long-term complementary financing to

- projects that strengthen **competitiveness**
- projects that enhance **the environment**
- All projects are analysed for their environmental impact





# **NIB:s Energy Lending support the energy strategies of its member countries and that of EU/EEA**

- **Energy portfolio approx EUR 5 billion. Annual disbursements in BSR appr. EUR 600 million;**
- **Energy efficiency and savings, including energy efficiency of buildings, district heating and district cooling, Street lighting;**
- **Grid, regional and distribution networks incl. cross-border connections;**
- **Security of Supply:**
  - electricity capacity;
  - regional gas networks;
  - renewable energy(RES)
- **Innovations; and Technological cooperation.**

# NIB is a long-term lender

- Corporate loans, 5–15 years
- Sovereign loans to states or against state guarantee, 15–25 years.
- Sub-sovereign loans directly to municipalities, 10–20 years.
- PPP financing, 5–15 years.
- Financing SME via financial intermediaries, 5–12 years.
- Loan amounts: EUR 10-150 million.
- Max. 50% financing, 3-7 years grace

# NIB and CHP

- High Priority in NIB and BSR
- Normally Supports Competitiveness and/or Environmental Mandate
- Fuel options
  - Renewable
  - Fossile
    - Peat dilemma

# RES -fuels

- **Waste**

- Ownership unclear
- Changing approach to Monopoly vs Commercial activity
- Sweden and Norway – substantial imports of waste
- Lithuania – only local use, no national access, no imports
- Poland, Poznan waste incineration to start in 2016, Finland Vantaan energia start in 2014. Tallinn waste incineration 2014 (import of waste from Finland)

- **Biomass**

- Whole BSR

- **Biogas** – risk for competition with food production. NIB case by case based on sustainability assessment.

# Fossile fuels and CHP

- Generally decision or target to stop using fossile fuels
  - Recently Norwegian target by 2018
- CHP electricity often to secure supply. In future important to have flexible heat/power technology
- Coal
  - Largely in use in Poland, Germany. Finland considering coal in Helsinki and SW Finland
- Natural Gas and LNG
  - Latvia, Lithuania
- Peat
  - Green certificate in Sweden, Feed-in in Finland
  - Often to increase efficiency in biomass CHP/waste incineration
    - Could be replaced with sulphur
- NIB – no to coal. Peat and Gas on exceptional cases under competitiveness mandate, primarily up to 1/3 in biomass chp's

# Selected Projects Nordics

- **Network Connections (national and cross-border)**
  - Norway-Holland, Skagerak 4 DK/NO, Fennoscan, Åland/Finland
- **Power production, CHP, DH, District Cooling**
  - Landsvirkjun, HPP Búðarháls, Iceland 585 GWh
  - Lake Tasersuaq HPP, Greenland/DK, 52 GWh
  - Vaskiluodon Voima, Finland 140MW gasification/bioenergy
  - Akershus Energi AS, Norway, Lillestrøm CHP, hydropower
  - Vimmerby Energi&Miljö AB, Sweden 90 GWh(th) and 20–25 GWh (e)
- **Wind power**
  - Gabrielsberget Windparks North/South, Sweden 92 MW
  - Jädraås windpark, Sweden 198 MW
  - Dong Energy, Anholt offshore wind farm 400 MW
  - Tractebel Energia S.A. , Brasil 15.4 MW.

# Selected NIB financed Baltic Projects

- **Estlink 1**, Main financier
- **Eesti Energia AS**, 1st long term financier, institutional support in 90's
- **Latvenergo A/S**, 1st long term financier
- **Elering AS, Estlink 2** and other transmission
- **Fortum Tartu AS**, CHP
- **Lithuania**, Public Sector Energy Efficiency, Many Credit Lines and Institutional Support
- **Latvia**, Credit Lines for energy efficiency and environment in municipalities
- **Fortum Klaipeda UAB**, 1st waste incineration/CHP in Baltics

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