



Cleaner and more cost effective industry in Macedonia

3 year programme funded by Government of Kingdom of Norway

Skopje, 1st February 2011

Ann Iren Glimsdal
Senior Consultant, Norsk Energi
ann.glimsdal@energi.no
www.energi.no



Norwegian Ministry of
Foreign Affairs

The logo for CCEI, consisting of the letters "CCEI" in a bold, blue, sans-serif font.



Content

- Norsk Energi
- Programme Aim
- Activities conducted
- Actors involved
- Energy Efficiency Component
- Agenda
- Website



Norsk Energi

- Industry association established in 1916
- Energy, environment and safety
- 80 experts with BSc, MSc and PhD
- Consultancy, engineering services, analysis and training
- Independent from equipment suppliers and manufactures
- 90% of turnover from private industry
- International projects mainly funded by Norwegian government and IFIs



ENERGY ENVIRONMENT SAFETY

The effective, environmentally friendly and
safe utilisation of energy

Is reducing CO₂ emissions important
for you too?

NORSK  ENERGI

www.energi.no

ENERGY

Studies

- Process design
- Improving energy efficiency
- Energy and heating plans
- Feasibility studies

Production plant

- Renewable energy: biomass, biogas, heat pumps, waste heat recovery, wind power
- Fossil fuels: oil, gas, coal
- Automation and dynamic simulation
- Power production (turbines)

Distribution systems

- Steam and natural gas liquids/condensate
- District heating and district cooling
- Lube oil and compressed air
- Gas systems

NORSK  **ENERGI**

www.energi.no



ENVIRONMENT

Environmental studies

- Environmental impact assessment
- Dispersion and chimney height calculations
- Environmental and climate audits
- Emissions and concession applications
- Cleaner production methods, e.g technical environmental analysis

Assessment

- Atmospheric emission measurement
- Process and guarantee rating
- Fuel analysis
- Ash analysis

Consultancy/advisory services and training

- Emission reducing initiatives
- Environmental and quality control

- Environmentally friendly product development
- Environmental Control Board, ISO 14001

International climate projects

- JI and CDM projects worldwide
- Compilation of PINs and PDDs

NORSK  ENERGI

www.energi.no

SAFETY

Control

- Construction, production and condition checks for piping and storage vessels
- Verification and final control of plant

Analysis

- Risk analysis (HAZOP)
- Risk and vulnerability analysis (ROS)
- Explosion probability assessment
- Dispersion rate assessments for sudden emissions
- Safe Job Analysis (SJA)

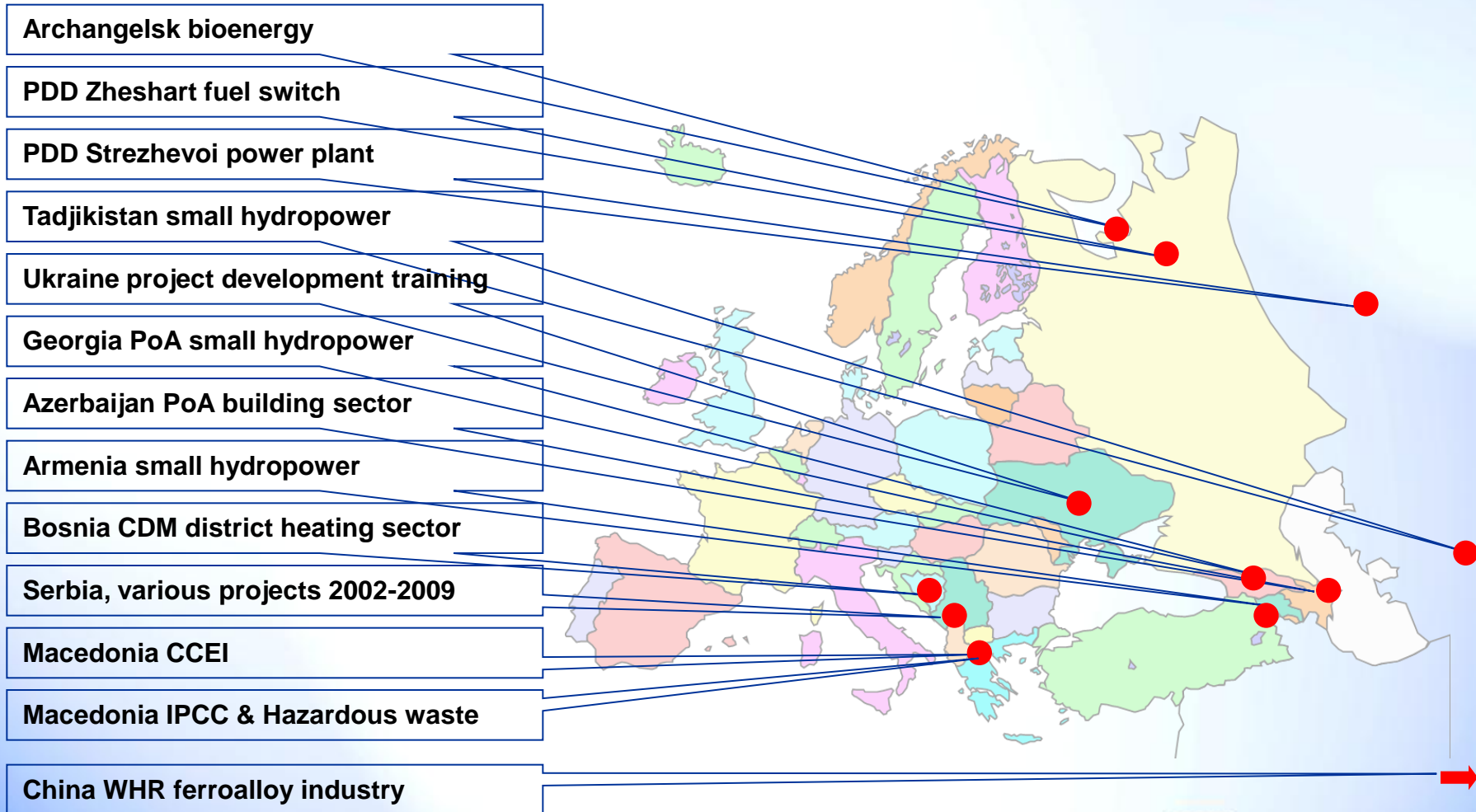
Courses

- Boiler tender training
- Safety training
- Company-specific training

HSE

- Emergency planning
- Design and set-up of HSE and quality systems

Norsk Energi's International Projects





Cleaner and more cost effective industry in Macedonia

P0429060



MAK-09/006

A three-years program funded by



Norwegian Ministry of
Foreign Affairs

Cleaner and more cost effective industry in Macedonia



NORSK  ENERGI

НЦЦП МКД





Program Aim

Cleaner and more cost effective industry in Macedonia 2009-2012

- Assist the Macedonian Industry in becoming more competitive in the market
 - Reduced energy costs
 - Improved environmental performance
- Develop a pipeline of climate projects
 - Identify project opportunities and support preparation of projects for financing
 - Present project to financing institutions
- Capacity building of young professionals
 - Involve young people in project development work and auditing





Activities conducted

Administration and Marketing

Preparation of brochure
Setting up website
www.ccei.org.mk
Signing of MoU with programme supporters

Energy Efficiency

Preparation of prefeasibility studies
Technical assistance in early stage project development
Preparation of business plans for selected EE projects
Eligibility assessment CDM financing
Presentation of projects to financing institution

ROUND 1 STARTED 2009
ROUND 2 STARTED 2010
ROUND 3 STARTING 2011

Student Exchange

Exchange of technical students for practical training abroad
1 outgoing and 1 incoming, 2010
1 outgoing and 1 incoming, 2011

Environmental Management

EMS TRAINING
PHASE 1:
Information seminar
2 workshops
QUALIFICATION ROUND
PHASE 2
• 3 workshops
• Site visits
• Technical assistance
• Audit



Certification ISO 14001



Actors involved

The Norwegian Ministry of Foreign Affairs

Finances the programme and oversees its implementation

Norsk Energi

Programme manager, has overall responsibility for implementation and reporting

Contact person: Ms. Ann Iren Glimsdal

Center for Climate Change

Local programme coordinator, facilitating the implementation of the activities

Contact person: Ms. Bojana Stanojevska

Ministry of Environment and Physical Planning & Ministry of Economy

Supports the programme with advices and guidance

Economic Chamber of Commerce

Support the programme in reaching out to the industry and arranging workshop

Local senior and junior consultants, 20 technical, financial and environmental consultants involved so far

Others

National Cleaner Production Centre at the Mechanical Faculty of UKIM

MANU

MCC – Industry Chamber

MBDP





1: Energy Efficiency Component

Activities conducted





1: Energy Efficiency Component

Activities conducted

- Phase 1: Autumn 2009 – March 2010
 - SILMAK, University Clinical Centre, Karpos Factory, Wab-tac Group (former Poli-MZT) and Teteks Yarn
 - Pre-feasibility reports presented to financing institutions and authority representatives 2nd March in Economic Chamber of Commerce
- Phase 2
 - REK Bitola, OHIS, Kavadarci Municipality
 - Pre-feasibility studies presented 1st Febr 2011
- Phase 3
 - Tender to be announced in February 2011





Financing opportunities for EE

Conclusion of assessment and Round Table Discussions

- Assessment of actual financing opportunities, June 2010
 - Large funds available
 - Few projects implemented using these funds
- Round table discussions between authorities, FI and industry
 - Little done on EE in Macedonia last 20 years
 - Energy saving opportunities exists
 - Industry could provide useful input in development of policies and credit lines
 - Support in identifying and developing bankable projects needed





Website

www.ccei.org.mk

CCEI

Cleaner and more cost effective industry in Macedonia

NEWS

ABOUT

DOCUMENTS

CONTACT US

search



NEWS

Positive Outcomes Of EMS Audit

January 19, 2011 in [All News](#), [Environmental management system](#) by [ccei_admin](#) | [No Comments](#)

Beton Stip, Makprogres and **Rade Koncar** were in *December 2010* subject to a mini EMS audit with the purpose of checking the progress and quality of the **EMS implementation**. The companies has been part of a program running for almost 9 months, where they have received free consultancy services from competent Macedonian consultants in addition to input from Norwegian experts.

 [SHARE](#)   

First Meeting Of Experts

January 3, 2011 in [All News](#), [Energy Efficiency](#) by [ccei_admin](#) | [No Comments](#)

3rd of September 2009 – First Meeting of Experts, Faculty of Mechanical Engineering conference room K3-9
One day seminar organized for experts and representatives from Macedonian companies with main aim to identify barriers that the Macedonian industry companies are facing.

 [SHARE](#)   

Enviromental Management System

December 28, 2010 in [All News](#), [Environmental management system](#) by [ccei_admin](#) | [No Comments](#)

ABOUT THE PROJECT

Cleaner and more cost effective industry in Macedonia is a 3 year program funded by the Government of the Kingdom of Norway.



NORSK ENERGI

NEWSLETTER

Name

E-mail

[Subscribe](#)

CATEGORIES

[All News](#)

[Energy Efficiency](#)

[Enviromental management system](#)

[Student Exchange](#)

Agenda

09:00 - 09:30	Registration of participants	
09:30 – 09:40	Introduction to the programme	Ms. Ann Iren Glimsdal
09:40 – 10:00	Credit lines available for EE/RES from MBDP	Mr. Aleksandar Stanojkovski
10:00 - 10:15	What can WeBSEDFF offer to Macedonian industry?	Mr. Zivko Dimov
10:15 -10:30	Conditions for issuing loans from Tutunska Banka	Ms. Biljana Stepanuleska Pocevska
10:30 -11:00	Coffee Break	Economic Chamber of Commerce
11:00 - 13:00	Identified energy efficiency projects <ul style="list-style-type: none"> - REK Bitola – Project for cooling towers - REK Bitola – District Heating for Municipality of Bitola - OHIS Skopje – Energy Efficiency measures in Ohis Skopje - Kavadarci Project- Replacement fossil fuels with grape residues in Kavadarci Municipality 	Mr. Igor Mishevski Mr. Igor Mishevski Mr. Igor Petrushevski Mr. Dejan Lazarov
13:00 – 14:00	Buffet lunch	Economic Chamber of Commerce
14:00 – 14:20	Importance of energy efficiency in the industry sector	Prof. Dr. Risto Filkoski
14:20 – 14:40	Improving energy management in industry sector	Prof. Dr. Ilija Petrovski
14:40 – 15:00	Conditions for participation in the III rd phase of the programme	Ms. Bojana Stanojevska
15:00 – 15:30	Discussion and Summary	All participants