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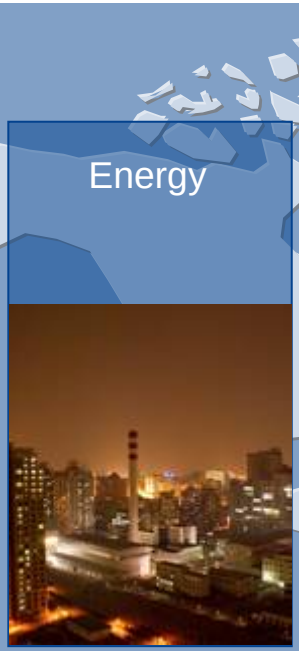
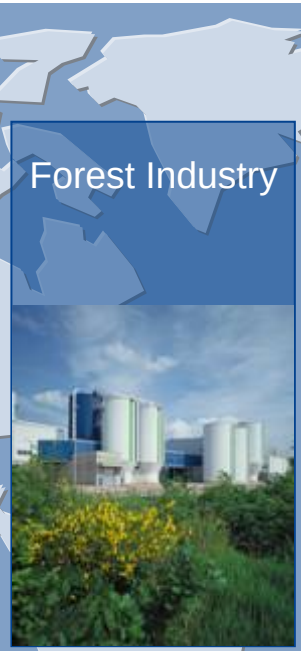
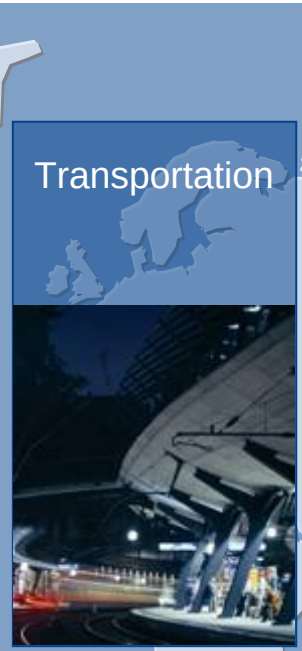
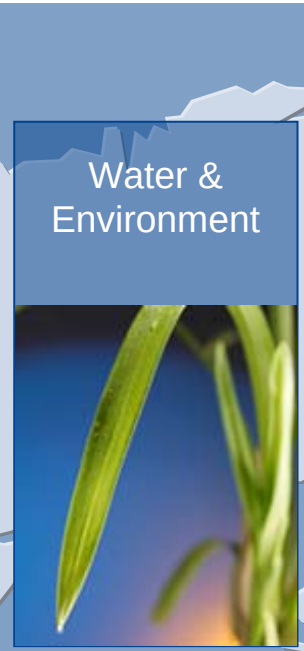
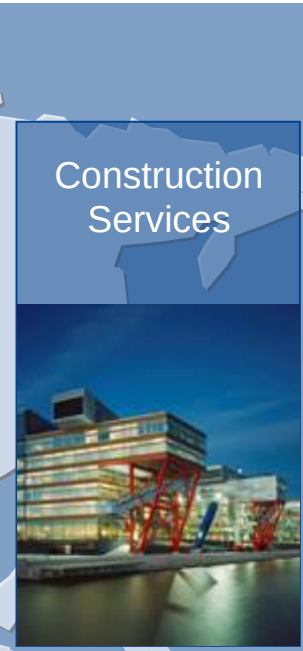
Pöyry is a global consulting and engineering firm with office network in 49 countries







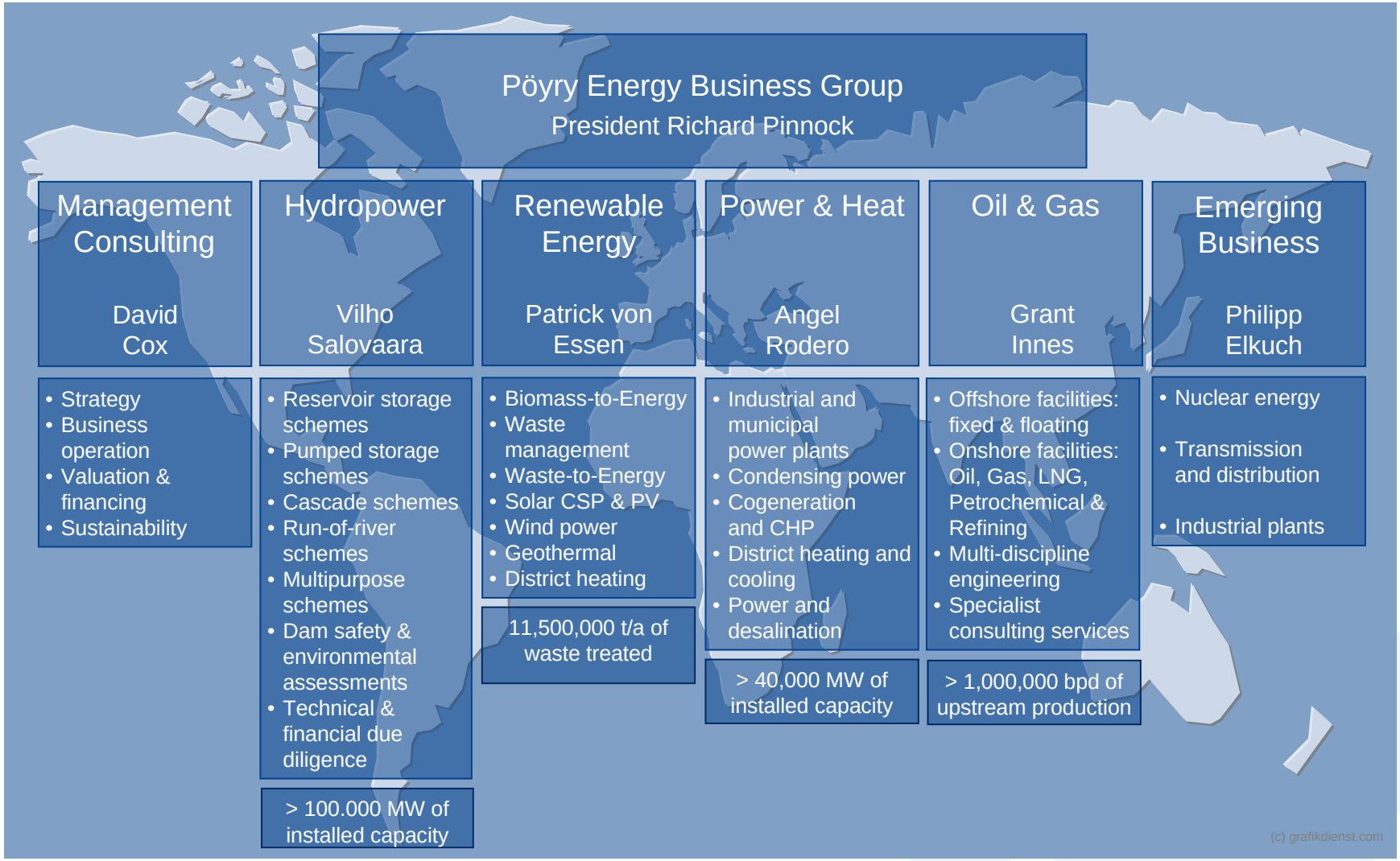




Lifecycle engagement through five know-how clusters

Pöyry offers a full range of services covering the entire lifecycle of client investment projects, combining in-depth industry expertise and best practices in management consulting, engineering and site services

Our organization is client and service oriented



Pöyry's services cover all stages of climate change

Mitigation

Reduce the GHG emissions and/or improve the global ability to adapt itself into CO2 emissions

- Energy efficiency
- Renewables
- Carbon capture & storage
- Market based mechanisms (emissions trading and project-based Kyoto mechanisms including forestry)

Adaptation

Reduce the negative impacts of Climate Change

- Construction technology
- Flood risk assessment & management
- Location and real estate

Reacting

Remediation after Climate Change related occurrences

- Renovation of affected buildings
- Ability to reach for the chance
- Insurance consulting

The advantages of participating in the project-based mechanisms of Kyoto Protocol

September 29, 2009
AEB Conference
Implementation of Kyoto Protocol in Russia:
Business Approaches

Energy-related CO_2 emissions produce 61% of global GHG emissions

- About 40% of the energy-related CO_2 emissions are generated by power sector
- In 2008, the IEA Reference Scenario till 2030 forecasted:
  - the world energy-related CO_2 emissions to grow with an average rate of 1,6%/year
  - the fossil-fuel power plants share in the world's CO_2 emissions to reach 45% in 2030 with the coal remaining the main fuel used for power generation

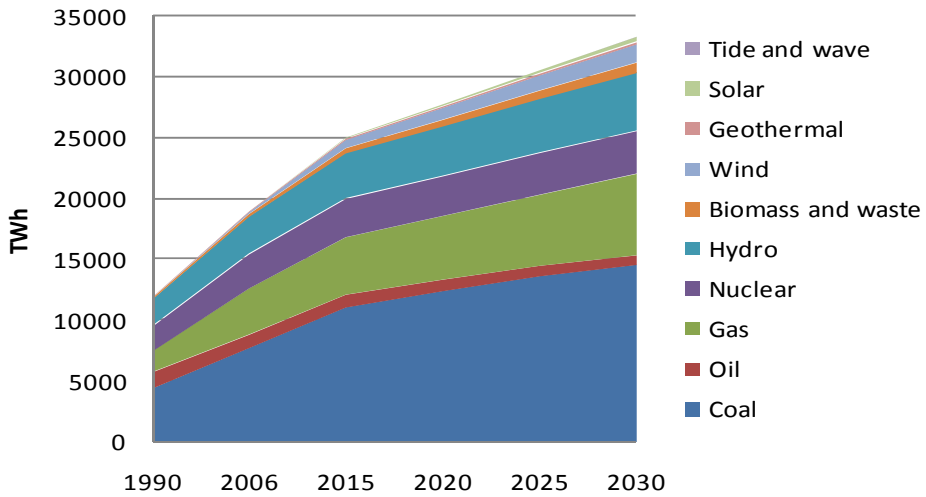


Figure: Electricity generation development (World), Reference Scenario (based on mid-2008 policies approved)

Source: IEA, WEO 2008; Energy Technology Perspectives 2008, Scenarios & Strategies to 2050

Recession may lag the forecasted energy generation and respective CO_2 emissions development in the short-term, but not eliminate the trend and spur it in the longer term

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The normal cycle of capital replacement is often a key constraint on the speed with which new technologies can enter into use

- A relatively slow rate of capital replacement in the energy sector normally slows the spreading of more efficient technologies, particularly in the power generation
- Large up-front costs and long operating lifetimes effectively lock in all the associated emissions for the project life period accounting to 25-50 years -/+ life extension and retrofitting

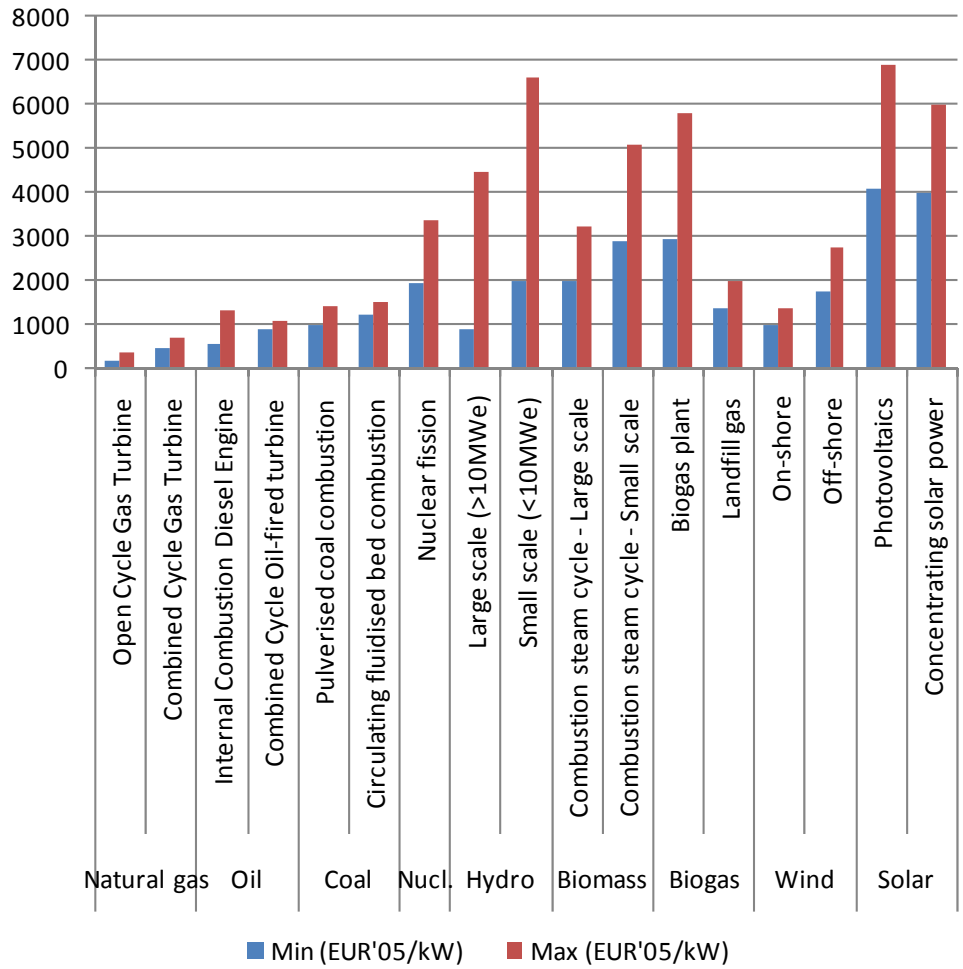

Figure: SCI, 2007 state-of-the-art

Source: EC, SEC(2008) 2872 / COM(2008)781final

In Russia, the energy sector generates 81,5% of GHG emissions

- About 3/4 of the energy-related GHG emissions are caused by the fuel combustion activities, where about half comes from the power and heat generation
- Many power and heat generation, transmission and distribution facilities are technically obsolete or becoming obsolete, consequently generating more emissions
- Various isolated areas and some UES regions look rather depressive from the energy business point of view
- Many efforts are done with regards to the new large-scale capacity commissioning, still good efficiency results may be achieved through modernization
- Renewables, though gaining political support, require further regulatory and financial incentives for +/- sensible deployment

Sources: RF National Inventory Report, 2009

Additional revenues through JI may contribute to viability of a vast variety of projects on the energy supply side

- On the energy supply side:
  - Energy efficiency measures on the supply side:
    - Power plant rehabilitation
    - Open cycle to combined cycle/Cogeneration
    - Higher efficiency of natural gas power
    - Higher efficiency using waste heat
    - Higher efficiency of steam boiler
  - Fossil fuel switch:
    - Coal/lignite to natural gas or renewables
    - New natural gas plant
  - RES-run facilities
- On the energy distribution site:
  - District heating networks
  - District heating boilers

A JI project may be organically integrated to a regional/company asset development plan, rendering the latter one step closer to the implementation

Project-based activities deliver value through their “additionallity” to the baseline development

Project-based activities deliver value through their “additionallity” to the business-as-usual practice:

- emissions are reduced below those that would have occurred with current laws and regulations and conventional technology
- a non-common practice in the region or sector is applied
- the least financially attractive option is proposed
- the project activity faces such "barriers" as:
  - financial = inability to get bank loans
  - technological = lack of infrastructure for implementation or skills/labour to operate the technology
  - "first of it's kind" = no project activity of it's type is operational in the region/country

- Contributing to sustainable economic growth
- Transfer of technology & financial resources
- Learning of sustainable ways of energy production and industry
- Increasing energy efficiency & conservation
- Achieving local environmental and social benefits

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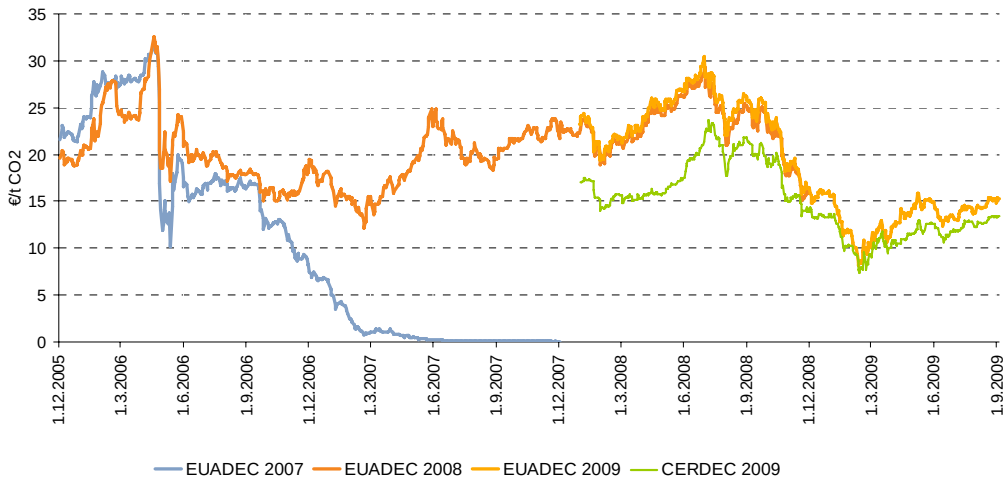
The incentive rests on the possibility of the industrialized parties meet their national obligations at more favorable costs

- The cost of generating credits from CDM/JI projects is in the range of €2-12/tCO2
- This compares with carbon prices in Europe that have traded between €10-30/tCO2
- While prices in the CER/ERU traded markets are slightly below the prices of the EU Emission Trading Scheme (EUA) this still represents a large potential value to be captured

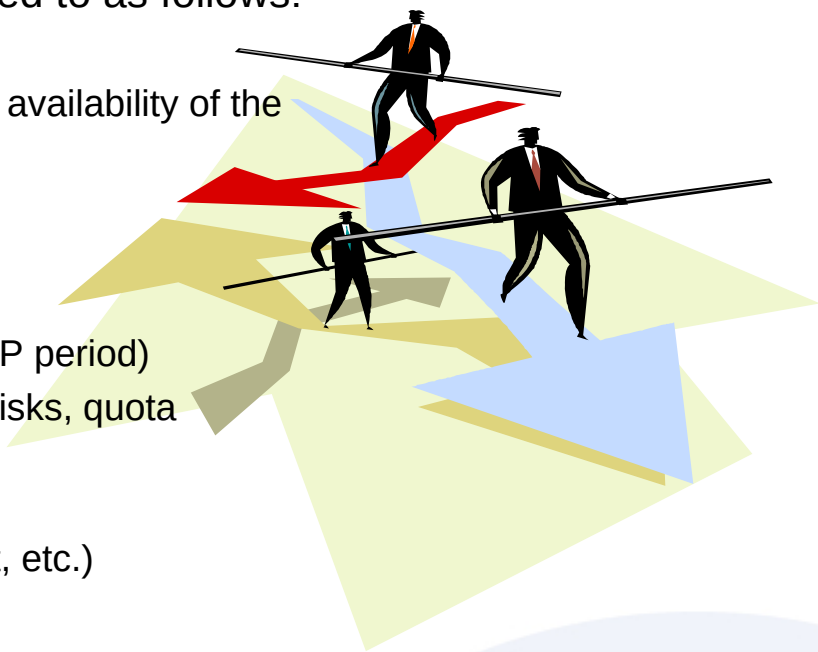
CARBON PRICE IN EUROPE



Source: Pointcarbon & Pöyry

Yet, it is not a cash generating machine: specific requirements should be respected and risks managed

- The major risks related to the JI/CDM project are deeply interdependent with the successful implementation of the investment project, and include but are not limited to as follows:
  - feasibility of the project activity
  - compliance with the JI/CDM requirements (e.g. availability of the approved methodology and its applicability)
  - technology related risks
  - permission/licensing-related risk
  - project commissioning risk (e.g., actual size and scope by the end of the KP period)
  - country/regulatory risk (JI registration process risks, quota availability)
  - internal and partner risks
  - market risks (prices for ERU/CER, fuels, output, etc.)
  - O&M skills-related risk
  - viability of the marketing strategy
  - feasibility of the monitoring activities – are they realizable in the material world?



- The JI/CDM development should be undertaken in parallel to the conventional project cycle with synergies with the engineering activities

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The activities under the project-based mechanisms may be applied to various sectors of economy, though energy is in focus

Project Type	Advantage	Possible risks
Renewable Energy	• Easier to prove Additionality • Many approved Baseline Methodologies available	• Complex projects leading to difficulties in establishing baseline, or changing baseline conditions • Delivery of credits could, for example, be affected by delays in making project operational
Biofuels	• Many newly developed technologies available (e.g. Ethanol, Biodiesel, etc.)	• Limited approved Methodologies available (several rejections by UNFCCC bodies) • Difficult to show where fossil fuels are finally reduced • EU blending obligations make Additionality difficult to prove
Energy Efficiency	• Many approved Baseline Methodologies available • Historically high acceptance in approval bodies	• Recently the percentage of projects flagged up for review has risen; several rejections of methodologies • Complex projects due to possible interference with production processes • Requires disclosure of process information • Difficult to monitor emission reductions • Additionality affected by variations in fuel prices
Fuel Switch	• Rather simple projects • Proven technologies	• Additionality affected by variations in fuel prices
Other GHG recovery or destruction (CH_4, N_2O, HFC)	• Easier to prove Additionality if no other revenues than from ERU sale • Proven technologies available and large number of credits generated	• Concerns over sustainability effects • China imposes a 65% levy on CER revenues from HFC projects, feeding a separate fund to support sustainable development activities

Selected project examples

Pöyry Project References / Country	Potential emission reductions (tCO2/year)	Potential income EUR/year (e.g. 10EUR/tCO2)
Landfill gas JI project in Russia Landfill gas capture and electricity generation	78,000	780,000
Aluminium smelter JI project Improvement of the industrial process of production of aluminium by reducing the frequency of Anode Effect	215,000	2,150,000
Energy efficiency JI project in Russia Installation of a new turbine in CHP plant	100,000	1,000,000
Wind park JI project in Bulgaria 300MW wind farm connected to the national grid	1,820,000	18,200,000
Large scale hydro power CDM project in Bhutan 110 MW run-of-river hydro power	500,000	5,000,000
Biomass power CDM project in Uruguay Black liquor-based surplus electricity generation to the national grid	40,000	400,000

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To generate the value and achieve advantages the process requires a lot of professional effort

Though limited in scale, the project-based experience under Kyoto Protocol has the foresight to provide long-term values

- The long-term business success in the globalized world is increasingly conditioned by **the public trust**, thus extending the responsibility of the companies from this to their shareholders to that of the society and environment
- JI forms an important learning-by-doing platform leading to **deployment of more knowledge-based products and services**
- New business practices introduced through JI call for the comprehensive HR development programs (e.g. training sessions), **sensitizing the personnel to the efficiency spread over other business processes**
- The optional basis of attendance to this mechanism represent for Russian business a rather painless **introductory course to less-carbon operations** compared to carbon tax or emission allowances
- The **growing internationalization** of the business (e.g. listings, supply chain) exposes local companies to the environmental compliance rules at their target markets and conditions the **competitiveness** of their products
- **International businesses** looking for major access to the regional markets may benefit from this know-how exchange either by **swap of their obligations** under the cap-and-trade schemes or **testing the ground of the potentially target markets**
- To maximize the value of JI experience, it should be done professionally – **thorough and comprehensive managerial, economic, environmental and engineering expertise should be activated** and project owner's personnel involved throughout the project cycle

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