



European Union  
European Regional  
Development Fund



# DOSSIER

## 1<sup>ST</sup> RESINDUSTRY MEETING

### Prague, Czech Republic

22 – 23 October 2019





## Index

Introduction .....	3
1 <sup>st</sup> Interregional Event Summary .....	4
Kick-off Meeting + Master Class .....	5
Interregional Workshop 1 (IW1).....	7
Workshop Summary .....	8
BP Template Revision.....	8
BP Selection and Scoring .....	9
Criteria to evaluate BP & scale .....	9
Barriers to RES in industry.....	10
Motivations to RES in industry .....	10
RESINDUSTRY Best Practice Template.....	11
Examples of Best Practices .....	16
Study Visit 1 (SV1).....	22



## Introduction

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RESINDUSTRY aims to increase the energy independency of the EU industry sector, by decreasing its energy intensity through a higher integration of RES. The long-term objective is to increase the industry competitiveness by decreasing its energy bill, rising their energy independency, thus uncoupling their energy costs from geopolitical externalities.

To achieve these long-term strategic objectives, the short-term objectives are to boost RES investment in industry by improving Ops with new policies for RES promotion.

### MAIN OUTPUTS

- 7 Action Plans influencing 8,1 M€ of SF and 2,5 M€ non SF
- 90 participants with increased capacity
- 83 policy learning events
- 10 Best Practices for Policy Learning Platform
- 7 Regional Assessments, including the Strategic Analysis of RES Technologies for regional industry and KPIs reports.

### PROJECT PARTNERS

- Czech Technical University in Prague, University Centre for Energy Efficient Buildings (CZ)
- Lahti University of Applied Sciences (FI)
- Extremadura Energy Agency (ES)
- Tartu Regional Energy Agency (EE)
- Marshal Office of Świętokrzyskie Region (PL)
- Vorarlberg University of Applied Sciences (AT)
- Ministry for Gozo (MT)



## 1<sup>st</sup> Interregional Event Summary

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On 22 and 23 October 2019 the Czech Technical University in Prague, University Centre for Energy Efficient Buildings hosted the first event that marked the start of the Phase 1 of the RESINDUSTRY project.

The event brought together project partners, local, regional and national stakeholders influential in the field renewable energy sources (RES) in industry, as well as representatives of the financial sector, addressing the financing of investments in energy efficiency.

On the first day an internal project meeting took place in Praha 2 to kick the beginning of the project. The main topics to be discussed were project outputs and outcomes, exchange methodology, project management, and communication and dissemination. The Master Class led by Javier Muños Ordoñez focused on learning activities and exchange of experience specific to project cooperation in Interreg Europe.

The following day, on Wednesday 23 October an Interregional Workshop on Best Practices took place in the Ministry of Industry and Trade CZ in Prague. Both national and international partners and stakeholders learned about regional policy instruments supporting renewables in industry and actively helped to define how to evaluate best practices.

In the afternoon the group of partners and stakeholders travelled to Luna Plast company in Hořín nearby Mělník in the Czech Republic. There they had Study Visit with the Company Director, Petr Novotný. He showed everyone around the grounds, including the production line and water wells, and explained the entire production process. The installed photovoltaics system on the roof of the factory covers up to one-fourth of their energy consumption.



Luna Plast factory in Hořín near Mělník



## Kick-off Meeting + Master Class

The kick-off meeting was hosted by the Lead Partner CTU and provided the first opportunity for all project partners to meet in person. The day was split in two main topics: Master Class on Exchange Methodology and Project Management, including communication.

The Master Class led by Javier Muños Ordoñez was divided into three blocks:

- Concept 1: Integrated Approach to Learning
- Concept 2: Multilevel Learning
- Concept 3: Quality of Learning

Each block consisted of a short presentation, group work and group presentation, and learning was evaluated at the end of each block using online app Kahoot!. The main focus was on learning activities and exchange of experience specific to project cooperation in Interreg Europe. It provided the participants with insight and tools to start drafting their own exchange methodologies.

The Lead Partner presented a variety of administrative and financial aspects of the project. A Steering Committee was established. AGENEX introduced a Communication and Dissemination Plan for the project, including publicity requirements.

### Project Partners





## Agenda

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**Tuesday 22 October 2019**

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**Venue:** Green Garden Hotel, Fügnerovo náměstí 1865/4, 120 00 Praha 2, Czech Republic

### Kick – off Meeting + Master Class

08:30 – 09:00	<b>Welcome coffee</b>
09:00 – 09:30	<b>Introduction</b> Welcome from the Czech Technical University Brief presentation of partners - All 7 partners Explanation of agenda and Introduction of the general framework of the project - CTU
09:30 – 10:30	<b>Master Class – Integrated Approach to learning</b> Rationale for interregional cooperation projects Policy instruments Rationality of Interreg Phases
10:30 – 10:45	<b>Coffee break</b>
10:45 – 12:00	<b>Master Class – Multilevel learning</b> Levels of learning Actors involved in every level Activities created to reach the levels
12:00- 12:30	<b>Communication and Dissemination</b> Communications Strategy – AGENEX
12:30 – 13:30	<b>Lunch</b>
13:30 – 15:00	<b>Master Class – Quality of learning</b> Existing quality structure Quality tools of the project Level of quality to be achieved by actions
15:00 – 15:15	<b>Coffee break</b>
15:15 – 16:15	<b>Project Management</b> Setting up management structures: Steering Committee, Robust Quality Unit Setting Project Handbook – Work Plan, Finance Management
16:15 – 16:45	<b>Summary, Agreements and next steps</b> Information about the following day agenda, Interregional Workshop and Study Visit Summary and next steps
16:45	<b>End of the day</b>
19:00	<b>Project Dinner</b>



## Interregional Workshop 1 (IW1)

On the 23 October 2019 partners and stakeholders participated in the Interregional Workshop that took place in the Ministry of Industry and Trade CZ in Prague. In the first section each project partner had a brief presentation of their region, their policy instrument supporting integration of renewable in industry in their region, and also an example of best practice where available.

1. Energy Savings, OP Enterprise and Innovations for Competitiveness - Jaroslav Pavlica, Ministry of Industry and Trade CZ
2. Sustainable growth and jobs 2014 – 2020, Finland's Structural Fund programme – Sami Luste, Lahti University
3. ROP FEDER 2014-2020 Extremadura - Beatriz Rico Sánchez, AGENEX
4. OP for Cohesion Policy Funds 2014-2020 - Marten Saareoks, Ülo Kask, Tartu Regional Energy Agency
5. The Office of the Marshal of the Świętokrzyskie Voivodeship – Tomasz Gałucha
6. Energy Future Vorarlberg – Martin Dobler, FHV
7. Support for Renewables – Christian Cordina, Ministry of Gozo

After the coffee break it was time for all participants to engage into a discussion with each other to meet the objectives of the workshop, which was to evaluate a Best Practice Template and to propose a scoring system to evaluate best practices.

First, Jan Špale from CTU presented a draft template for Best Practice and also gave an overview of types of the RES according to the Czech legislation. Then the participants were split into groups and started to work on their group work assignment. They had 20 minutes to answer these five questions:

- revise Best Practice template
- review and score best practices as provided by partners
- devise criteria to evaluate and score best practices
- identify barriers and incentive of implementation of renewables in industry.

Afterwards each group presented their outputs, and their responses were immediately written down for everyone to see. The findings will be used to further develop the template and to design a scoring system to evaluate and select best practices. The IW1 summary you can find below.



## Workshop Summary

Interregional Workshop (IW1)  
Wednesday, 23 October 2019

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### BP Template Revision

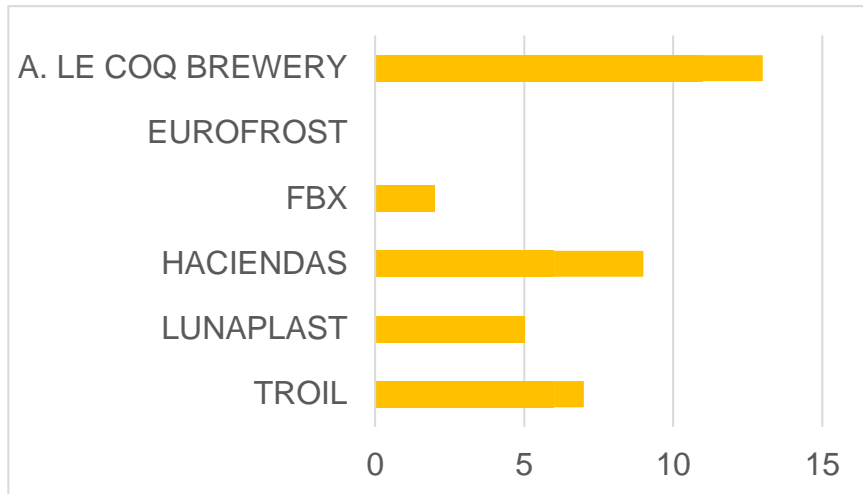
#### To be added/ changed/ removed:

- More structured description of “Detailed information on the practice”
- Character limitations per subject category
- Comparable return of investment
- Lending rate
- Photo of installation in the beginning of the template
- Develop replication criteria into more detail
- Specification of time schedule, from the very first idea until execution
- Payback period is „hidden“ – a separate row for such indicators
- Clarify RES%, include KPIs
- Specify not installed RES% but RES% of energy used – specifically solar fraction
- Investment costs per used kW
- Specific costs per production/consumption
- Policy instrument used, including its specifics – more detailed description of the policy instrument
- More information about the contracts





## BP Selection and Scoring



### Why?

- Luna Plast – large installation
- energy savings quantified, high % of RES
- complexity, combination of several RES
- management system, high quality innovation & complexity
- combination of systems, use of waste, innovative solution

### Criteria to evaluate BP & scale

- financial feasibility, energy savings, environmental impact, novelty of the idea, social influence
- ROI and other financial ratios, share RES, production per year, innovation
- specification of RES, net RES per costs per year, RES share on total energy, waste use
- IRR, increased energy independency, environmental aspects, replicability, circularity, amount % of subsidies
- financial efficiency, environmental efficiency, replicability, political impact
- energy efficiency (savings), financial efficiency (IRR – payback time, self-financing), environment – CO<sub>2</sub>, novelty, social influence



## Barriers to RES in industry

Identify up to 5 barriers to RES in industry:

- Technical
  - current technology
  - not enough specialists
  - reliability of RES
  - energy provider agreement
- Financial
  - high initial investment/ total investment costs
  - net payback
- Management
  - administration and time-demanding preparation of grant applications
  - time for implementation
  - lack of motivation (not a priority for industry)/ no focus on RES
- Legislation
- Geographical, geological and/or climatic limits

## Motivations to RES in industry

Identify up to 5 motivations to RES in industry

- Financial
  - energy savings/ lowered energy costs
  - governmental grants (subsidies)
  - tax incentives
- Social
  - generation of employment
  - independence (self-sufficiency)
  - corporate social responsibility (CSR) | positive PR & marketing
  - RES is the future | green profile
- Environmental



Jaroslav Pavlica, from the hosting Managing Authority, Ministry of Industry and Trade CZ



Participants  
working in group  
on the best Practice  
workshop





## RESINDUSTRY Best Practice Template

1. General information	
<b>Title of the practice</b>	[100 characters]
<b>Does this practice come from an Interreg Europe Project</b>	YES

In case 'yes' is selected, the following sections appear:

<b>Please select the project acronym</b>	RESINDUSTRY
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<b>Specific objective</b>	<b>Renewable energy sources used for industry</b>	
<b>Main institution involved</b>	<i>[Technical: The name of the institution and location of the practice are per default those of the practice author. They remain editable.]</i>	
<b>Geographical scope of the practice</b>	Select National/Regional/Local	
<b>Location of the practice</b>	Country	Drop-down list
	Region	Drop-down list
	City	Drop-down list

2. Author contact information	
<i>[Technical: Contact information comes from your community profile. You can edit it by visiting your user dashboard] Ideally, the owner of the good practice should fill in the form. Indeed, if you submit a good practice, your personal and organisational profile in the Interreg Europe community will be linked to it.</i>	
<b>Name</b>	
<b>Email</b>	
<b>Telephone</b>	
Your organisation	
<b>Country</b>	
<b>Region</b>	



<b>3. Detailed description</b>	
<b>Short summary of the practice</b>	[160 characters]
<b>Detailed information on the practice</b>	<p>[1500 characters] Please provide information on the practice itself. In particular:</p> <ul style="list-style-type: none"> <li>- What is the problem addressed and the context which triggered the introduction of the practice?</li> <li>- How does the practice reach its objectives and how it is implemented?</li> <li>- Who are the main stakeholders and beneficiaries of the practice?</li> </ul>
<b>Resources needed</b>	[300 characters] Please specify the amount of funding/financial resources used and/or the human resources required to set up and to run the practice.
<b>Resources used</b>	Institutional / Structural EU funds (describe the program used) / Other
<b>Total project costs</b>	
<b>Timescale (start/end date)</b>	e.g. June 2012 – May 2014/ongoing
<b>Installed capacity (kW)</b>	
<b>Ratio of energy produced by RES (%)</b>	
<b>Investment costs per installed kW (EUR/kW)</b>	
<b>RES type used</b>	
<b>Evidence of success (results achieved)</b>	[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).
<b>Challenges encountered (optional)</b>	[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.
<b>Potential for learning or transfer</b>	<p>[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided (if possible, specify the country, the region – NUTS 2 – and organisation to which the practice was transferred)</p> <p>[Technical: A good practice be edited throughout a project life time (e.g. to add information on the transfers that have occurred)]</p>



<b>Further information</b>	<i>Link to where further information on the good practice can be found</i>
<b>Keywords related to your practice</b>	<i>Select existing keywords or add</i>
<b>Upload image</b>	<i>[2000px wide recommended]</i>
<b>Expert opinion</b>	<i>[1500 characters] [to be filled in by the Policy Learning Platforms experts]</i>

<b>Criteria</b>	<b>Description</b>	<b>Value</b>
<b>Energy efficiency</b>	<i>Measures taken in the practise in RES brings more/less efficiency</i>	
<b>Financial efficiency</b>		
<b>Political influence</b>		
<b>Social influence</b>		
<b>Replication possibility</b>		



## Agenda

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**Wednesday 23 October 2019**

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**Venue: IW1** - Ministry of Industry and Trade, Politických vězňů 20, 110 00 Praha 1, Czech Republic

**SV1** - LUNA PLAST a. s., Hořín 93, 27601 Mělník, Czech Republic

### Interregional Workshop + Study Visit

08:30 – 09:00	<b>Registration</b>
09:00 – 09:15	<b>Welcome and introduction</b>
09:15 – 10:30	<b>Project and partner presentations</b> Brief presentation of each partner's policy instrument and region – 10min per partner <b>Czech Technical University in Prague (Czech Republic)</b> – Ministry of Industry and Trade: Operational Program for Entrepreneurship and innovation for Competitiveness (OPPIK) for the 2014-2020. Investment Priority 4b; SO 3.2. <b>Lahti University of Applied Sciences (Finland)</b> – Sustainable growth and jobs 2014-2020, Finland's Structural Fund Programme <b>Extremadura Energy Agency (Spain)</b> – ROP FEDER 2014-2020 Extremadura. Investment Priority PI 4.2 <b>Tartu Regional Energy Agency (Estonia)</b> – Operational Programme for Cohesion Policy Funds 2014-2020. TO 4. Supporting the shift towards low-carbon economy in all sectors <b>Marshal Office of Świętokrzyskie Region (Poland)</b> – Regional Operational Programme (ROP) RPOWŚ 2014-2020. PA 3. Effective and green energy; assumes the implementation of investments <b>Vorarlberg University of Applied Sciences (Austria)</b> – Vorarlberg Regional OP ERDF 2014-2020. P1-Strengthening regional competitiveness through research, technological development and innovation > M02-Inter-company R&D&I projects, collaborative projects and transfer competencies <b>Ministry of Gozo (Malta)</b> – A vision for an Eco-island
10:30 – 10:45	<b>Coffee break</b>
10:45 – 12:30	<b>Best Practice workshop</b> Introduction: workshop aims, activities and expectations Best Practice template presentation – CTU UCEEB Group Work <ul style="list-style-type: none"><li>- revision of Best Practice Template</li><li>- definition of KPIs for specific types of renewables</li><li>- improvement to provided Best Practice examples</li></ul>
12:30 – 13:00	<b>End of workshop and walk to the bus pick – up location</b>
13:00 – 14:00	<b>Bus trip to Mělník</b>
14:00 - 16:00	<b>Study Visit in Luna Plast a.s., Mělník</b>
16:00	<b>Departure to Prague by bus</b>



## Examples of Best Practices



### EUROFROST

INTERREGIONAL WORKSHOP (IW1) – BEST PRACTICE

INTERREG EUROPE - PGI06158

## **EUROFROST** Lowering energy intensity in a cold and frozen goods storage warehouse by solar PV

- operation of such warehouse is quite energetically demanding
- a stable demand for electricity during the year
- company decided to partially cover its consumption by installing solar photovoltaic panels onto their rooftop and a battery storage as an accumulation element in the dynamic system

<b>Resources used</b>	Company own capital, 80% incentives of the Ministry of Industry and Trade, external contractor of the PV panels, Energy auditor
<b>Total project costs</b>	125 000 EUR of which 80 000 are subsidies from the government
<b>Timescale (start/end date)</b>	30.11. 2018 - 30.9.2019
<b>Installed capacity (kW)</b>	98,8 kW of peak power production
<b>Ratio of energy produced by RES (%)</b>	0.1% ; 85 MWh to 168 000 MWh
<b>Investment costs per installed kW (EUR/kW)</b>	1265

### Lessons learned

- **Company's approach:** very neat practice, from the beginning – application for the subsidy to the energy audit and the realization part by an external supplier contracted by a selection procedure
- **Long administration process on Managing Authority side -** contradictory to the initial plan, the realization started a year later

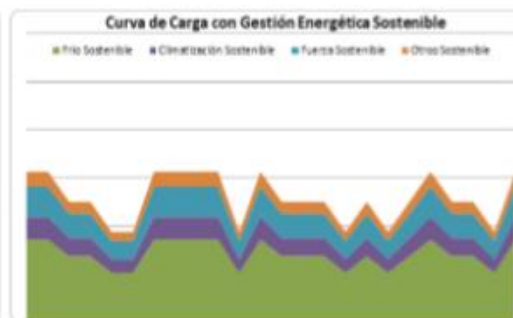
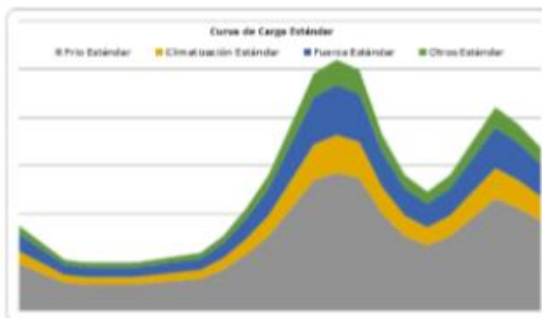




## HACIENDAS

INTERREGIONAL WORKSHOP (IW1) – BEST PRACTICE

INTERREG EUROPE - PGI06158



**HaciendasBio organic fruit and vegetable producer and export leader**

### Installation

- 200 kW from the grid
- PV Installation 300 kW
- Cogeneration (biomass) groups 235 kW
- Power generators for the support of alone systems

### Grants: Decree 115/2015

- Investment cost 350 000 €
- Grant- 30-40% (122 500 €)



## LUNA PLAST

INTERREGIONAL WORKSHOP (IW1) – BEST PRACTICE

INTERREG EUROPE - PGI06158



### Luna Plast

- SME, 45 employees
- plastic processing by extrusion and injection

### Project details

- PV Installation 300 kW
- 25% of overall energy consumption covered from RES
- Initial plans included energy storage and electric car charging station, however in the end not done

### Motivation

- Reduce production costs, taking into account final product costs and anticipated energy price increase

### Financing:

- Total project costs 7 145 162 CZK (278 500 €)
- Grant - 80%



## **FXB GROUP**

INTERREGIONAL WORKSHOP (IW1) – BEST PRACTICE

INTERREG EUROPE - PGI06158

### **Installation of PV System at the FXB Industry**

The FXB Group of Companies is the leading Maltese furniture group involved in the manufacturing and retailing of domestic and contract furniture.

- Roof mounted PV system having 334 PV panels with a total peak power of 100.20 kWp
- Generates 160,000 kWh annually capable of supplying 20% of the building's energy demand
- Reduces carbon dioxide by roughly 139 kg CO<sub>2</sub> annually





### TROIL

INTERREGIONAL WORKSHOP (IW1) – BEST PRACTICE

INTERREG EUROPE - PGI06158



#### Development of pilot plant for biogas production

- 60,000 tons of annual treatment with the possibility of 80,000 tons/ year

#### Grants: Decree 115/2015

- Investment cost 1 475 403 €
- Grant- 40% (300 000 €)

Ha sido beneficiaria del Fondo Europeo de Desarrollo Regional cuyo objetivo es potenciar la investigación, el desarrollo tecnológico y la innovación y gracias al que ha podido incorporar la innovación en sus procesos al realizar el proyecto de "DESARROLLO DE PLANTA PILOTO PARA PRODUCCIÓN DE BIOGÁS" para apoyar la creación y consolidación de empresas innovadoras.

Esta acción ha tenido lugar durante 2017. Para ello ha contado con el apoyo del programa InnoCámaras de la Cámara de Badajoz.

Una manera de hacer Europa



## A. LE COQ BREWERY

INTERREGIONAL WORKSHOP (IW1) – BEST PRACTICE

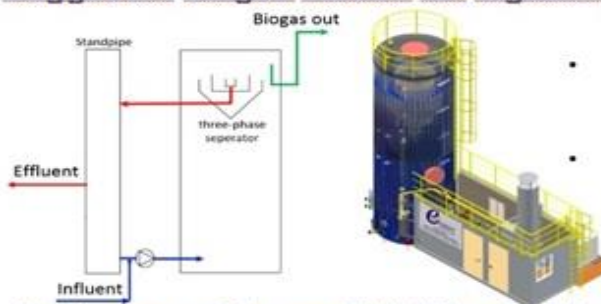
INTERREG EUROPE - PGI06158

- The company's key resources that could potentially be optimized are **water, waste water, natural gas and electricity**.
- In the base year (2016), 99,664 m<sup>3</sup> of beverages were produced and used for this purpose:
  - 290,000 m<sup>3</sup> of water (approx. 2.9 l / l),
  - 1.8 million Nm<sup>3</sup> of natural gas; and
  - 9.5 GWh of electricity (approx. 0.09 kWh / l).
- The company's total energy use (natural gas and electricity combined) in 2016 was **0.26 kWh / l**.

### Summary of resource efficiency measures:

Nr	Characteristics of measures	Units	Resource saving measures	
			New burner and scrubber	Biogas station
1.	Size of the investment	€	343 773	1 933 642
2.	Achievable resource savings	€/y	58 664	326 520
3.	Discounted payback period	years	12,8	13
Program evaluation criteria:				
4.	Achievable resource savings R	%	12,1	29,0
5.	Increase in resource productivity, r	%	13,8	40,9
6.	Cost efficiency K	-	7,2	5,1

### Suggested biogas station for digesting of all biowaste



- Anaerobic wastewater treatment is a very effective method of reducing biodegradable organic compounds in wastewater. Anaerobic treatment reduces COD and BOD by 80-90%.
- The treatment method generates about 620 Nm<sup>3</sup> of biogas per day (containing ~ 75% CH<sub>4</sub>), which, when fed to the boiler house, will save about 185,000 Nm<sup>3</sup> of natural gas per year.

### Indicators of the profitability of a biogas plant resource saving project

Profitability ratios	Values of profitability	
	100% self-financing	50% governmental support
Discounted payback period	13 years	4,5 years
NPV(i=12%)	118 377	1 085 198
IRR	13%	31%



## Interreg Europe RESINDUSTRY

“Policies for Renewable Energy Sources in industry “

INTERREG EUROPE - PGI06158

### Study Visit 1 (SV1)



**Luna Plast a.s.  
in Hořín nearby Mělník**



**Our guide, the Company  
Director Petr Novotný**