

# Sustainable Energy Finance

## Where is the Business Opportunity for FIs

IFC Global Financial Markets  
Russia Sustainable Energy Finance Program  
2010

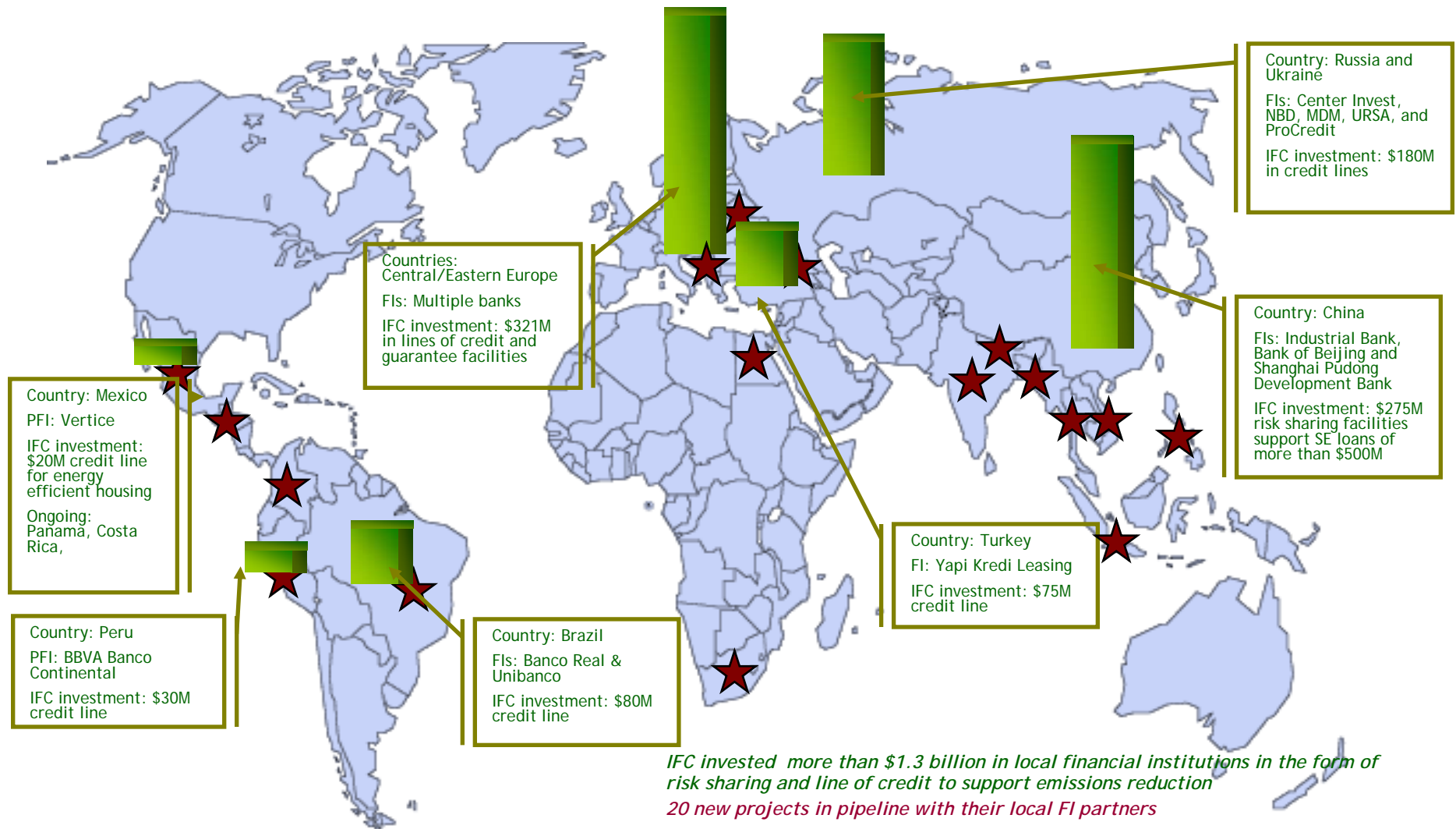
1. **Sustainable Energy Business Case**
2. IFC Sustainable Energy Finance Product
3. Eligibility Criteria & Reporting Requirements
4. Annex: IFC SE Definitions/Project Examples

# What is Sustainable Energy Finance?

Providing funding or risk sharing for following areas:

- **Energy Efficiency (EE):** Reducing unit energy consumption through increased efficiency
- **Renewable Energy (RE):** Generating electricity or heat from sun, wind, biomass or hydro sources
- **Cleaner Production (CP):** Minimizing waste and emissions from industrial processes and maximizing product output
- **Carbon Finance:** IFC looks at integration of carbon finance opportunities into these product lines

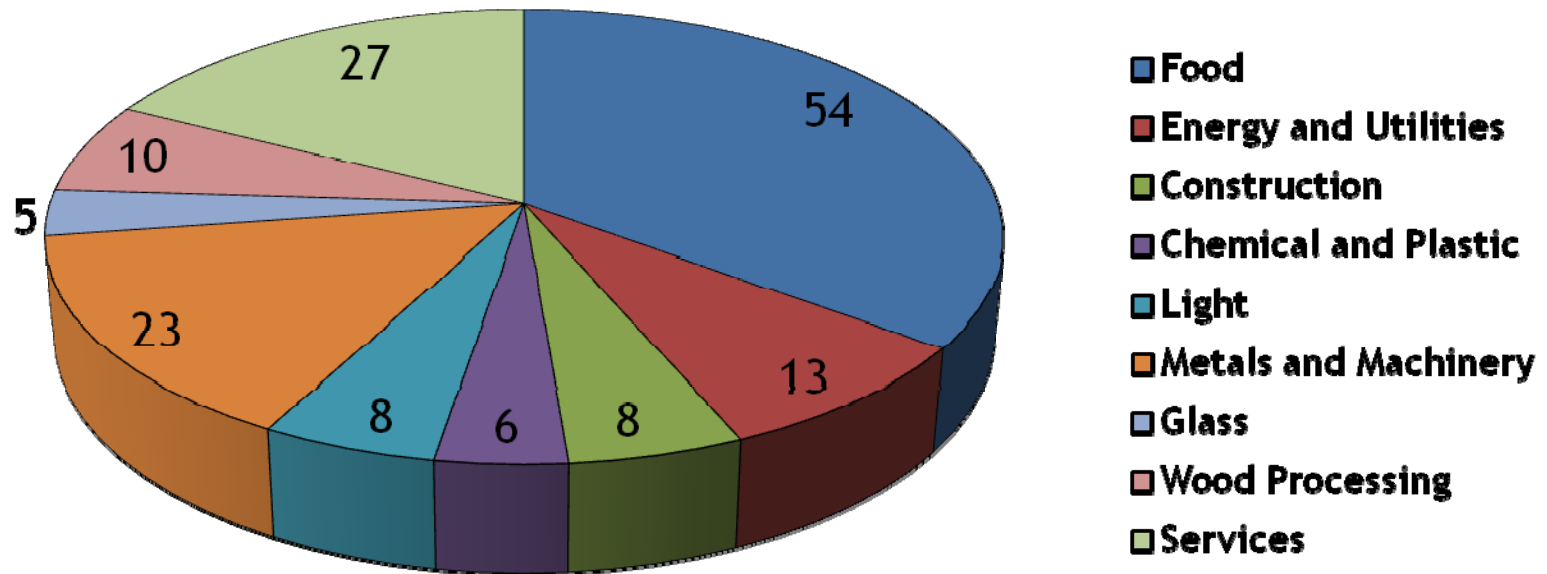
# IFC Sustainable Energy Investments via Fis



# Key Benefits for Financial Institutions

- **Expanded market share through new business line:**
  - Innovative product/first mover advantage
  - Sell on value to customer, not pricing
  - Monetize existing client base, attract quality new clients
  - New marketing channels through vendor partnerships
- **Improved risk profile of portfolio:**
  - Energy cost savings as a part of cash-flow
  - IFC risk sharing products
- **Positive social and environmental impacts:**
  - Enhanced brand reputation, PR opportunities

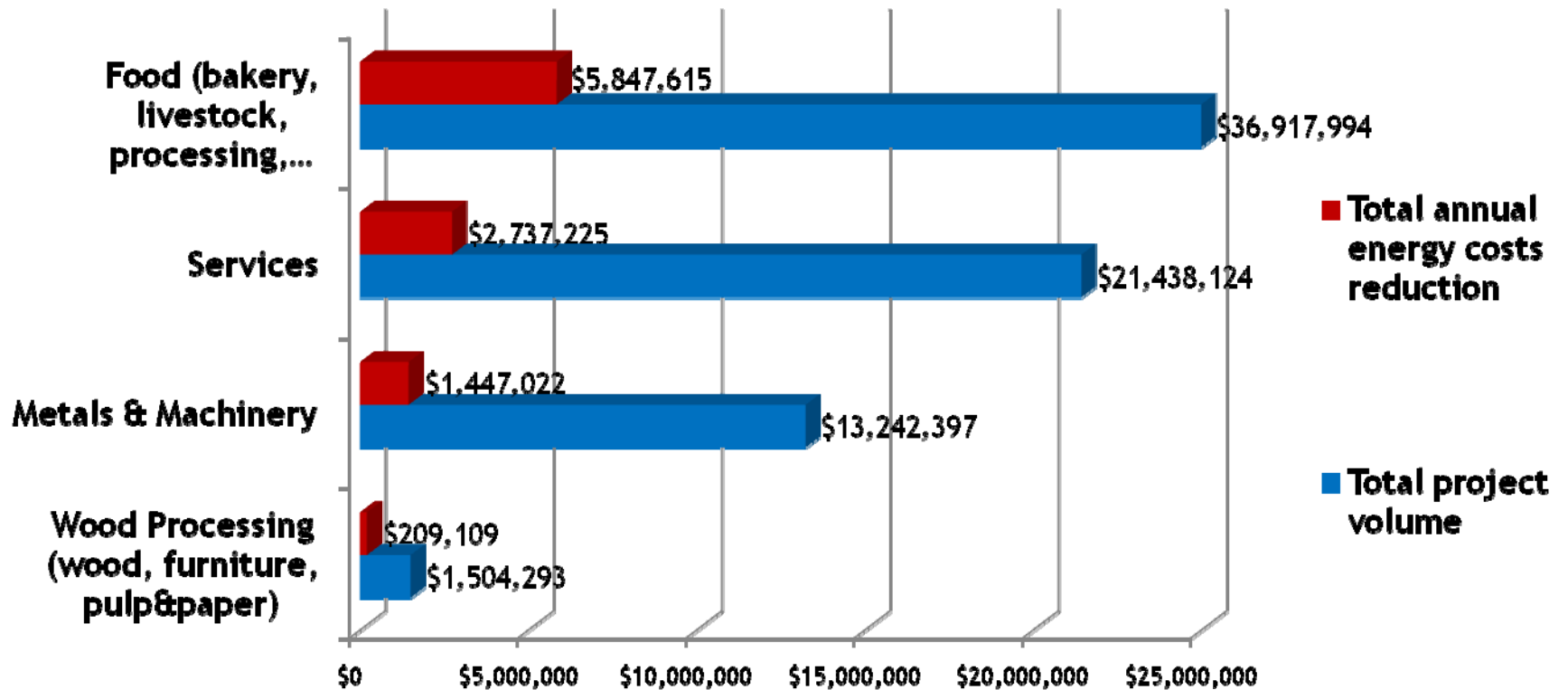
# EE projects can be found in all sectors



The most popular in Russian portfolio are: Food, Services, Metals and Machinery and Wood Processing

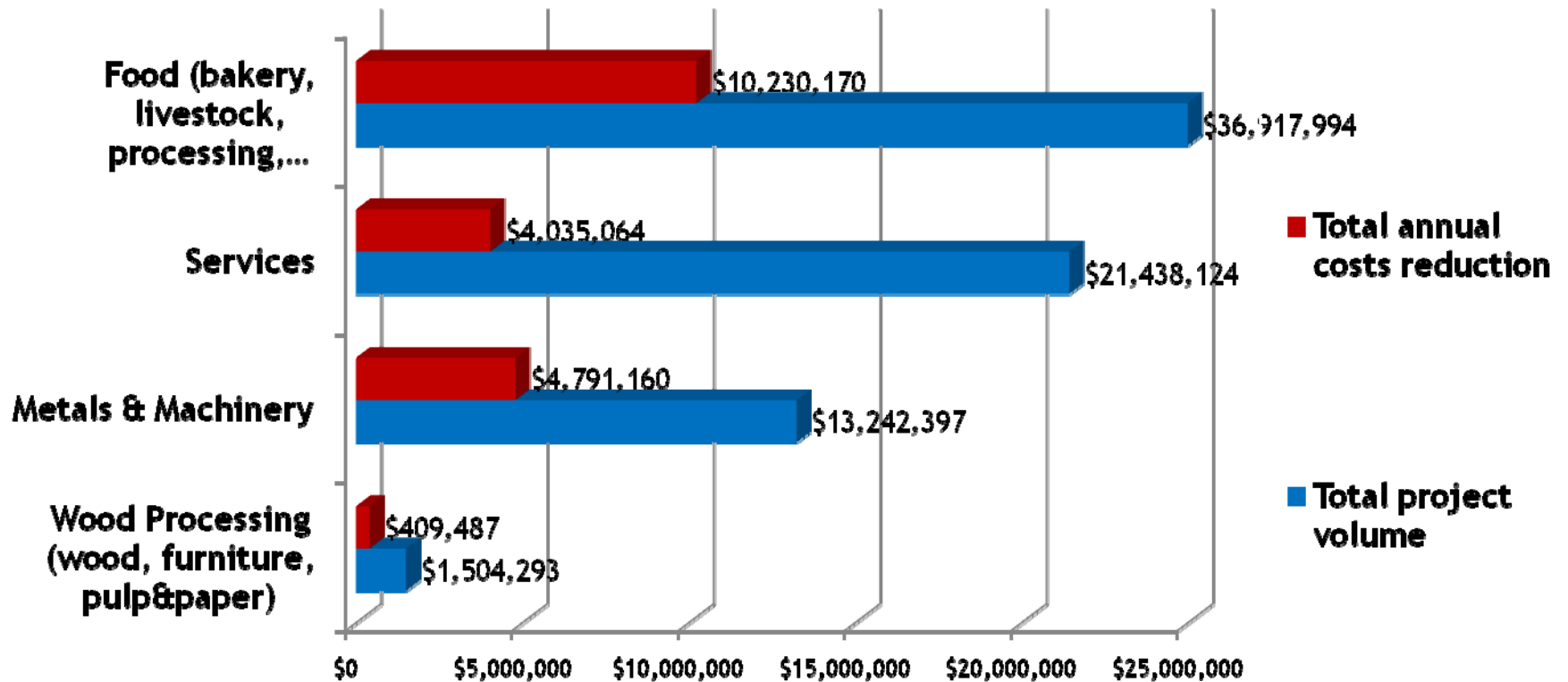
# Sectors chosen by FIs

Loan can be paid in 6 to 10 years with energy costs reductions only...



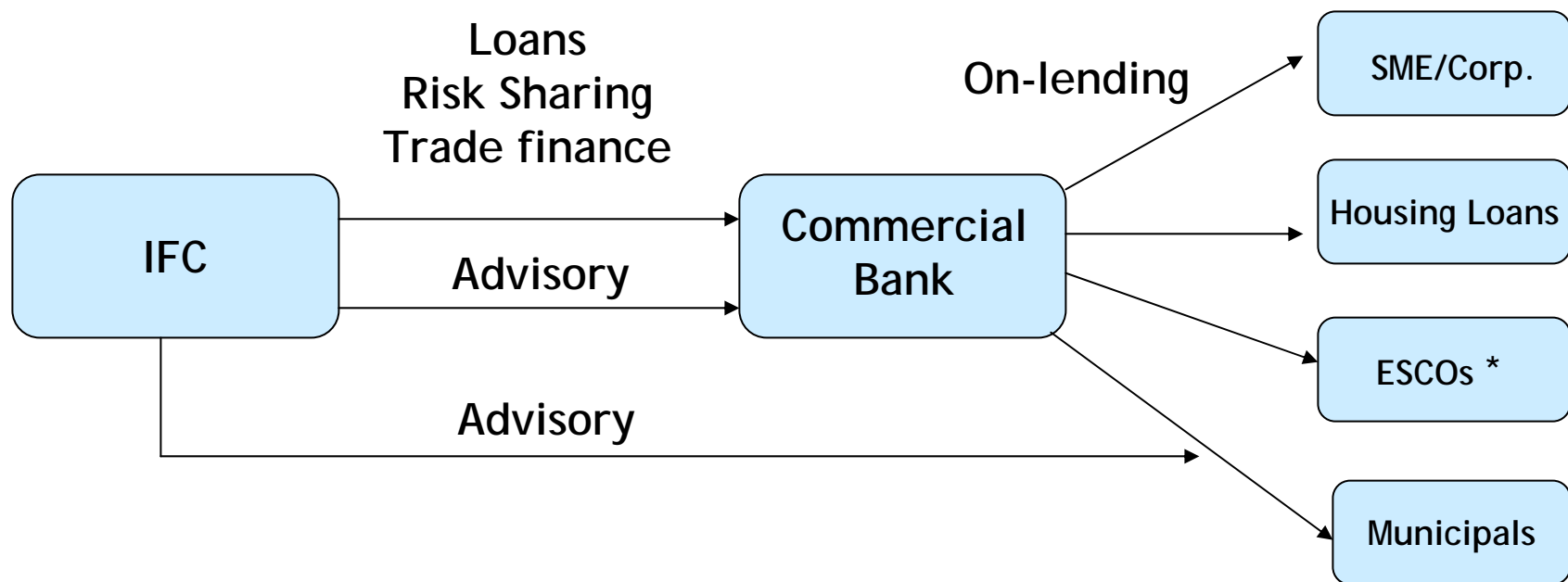
# Sectors chosen by FIs

... but with all savings, payback is less than 5 years



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# Wholesaling Through FIs: How do we work?



\*ESCO - Energy Service Companies

# IFC Financial Products for Sustainable Energy

Financial Products	Potential for use
Risk Sharing Facility (unfunded / funded)	Risk management and exposure
Credit Line	Liquidity
Long term credit line	Liability matching/liquidity
Sub-debt/mezzanine financing	Risk appetite/financing shortfall
Investing in Sustainability-focused Private Equity Funds	Risk capital for climate friendly projects/companies
Trade Guarantees	Trade risk mitigation

# AS Toolkit for Sustainable Energy Finance

- **Integration of the SEF model:**  
Product manual, assessment toolkit: energy efficiency calculator and user guide
- **Staff training**
- **Outsourcing of technical expertise**
- **Sales and Marketing activities:**  
Standard presentations, brochures, promo-campaigns, seminars for the clients, etc.
- **Transaction support** of the pilot deals/reporting

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# Eligibility Criteria in General

- Eligible Energy Efficient Sub-Project must be a project to finance *reconstruction, renovation or refurbishment*
- Financing may be in the form of sub-loans/leases, aimed at investing into fixed assets and *decreasing energy consumption* of the borrower or *utilizing renewable energy*
- Financing for *new projects*, not refinancing of an existing loan/lease
- Eligible are projects such as:
  - Generic equipment (HVAC, lightning, compressors, etc)
    - Energy savings per unit (ESU)  $\geq 40\%$
    - Energy savings ROI (ESROI)  $\geq 5\%$
  - Process equipment
    - ESU  $\geq 20\%$
    - ESROI  $\geq 20\%$

# Monitoring & Reporting

- Following bank's internal reporting procedure
- Simple, easy, no additional costs/burden
- Few additional info from clients required
- Information about project type/expected results:
  - estimation of energy savings per unit of production (%)
  - the expected yearly energy savings in physical units (kWh, GJ/year)
- Verification of results from external party on the sample base (once)

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# What are Energy Efficiency Projects?

Sector	Potential Borrower	Energy Efficient Equipment
Industrial	Industrial companies, SMEs and MSMEs	<ul style="list-style-type: none"> <li>•Energy efficient production lines</li> <li>•Waste heat recovery devices</li> <li>•Heating systems upgrades</li> <li>•Efficient boilers and heaters</li> <li>•Fuel switching (coal-gas, coal-biomass)</li> <li>•Electricity peak-load control systems</li> <li>•Cogeneration units</li> </ul>
Commercial	Housing complexes operators, maintenance companies; Housing developers	<ul style="list-style-type: none"> <li>•Heating and ventilation equipment</li> <li>•Control and metering systems</li> <li>•Electricity peak-load control systems</li> <li>•Air-conditioners</li> <li>•Heat pumps, solar water heaters</li> </ul>
Municipal	Municipalities, district heating companies, streetlighting operators, public buildings operators	<ul style="list-style-type: none"> <li>•Boilers for district heating as well as for public/municipal buildings</li> <li>•Heat exchangers, pipes for infrastructure projects</li> <li>•Cogeneration units</li> <li>•EE transport vehicles (buses)</li> <li>•Complex EE projects</li> </ul>

## Russian project example: process equipment

- New automatic chocolate line at a **confectionary factory**
- Unit energy costs reduced by **33%**
- Dramatically improved **product quality**
- Huge increase in **output capacity**
- Investment: **\$233k**
- Payback: **2 years**



# Russian project example: generic energy equipment

- **Lighting system retrofit** at a car manufacturing plant
- Installing **~10k FLs** with electronic ballast
- New **automatic lighting management** system
- Investment: **\$300k**
- Savings: **\$100k** per annum
- Payback period : **3 years**
- **Improved quality** of lighting



# Russian project example: renewable energy

- Boiler fueled by **sunflower seed husks**
- Annual **CO<sub>2</sub>** reduction of **10,600 tons**

Investment: **\$1.1 m**

Savings: **660,000 m<sup>3</sup>** of gas per month (**\$39k**)



## Contacts

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