

Department for External Economic and International Relations of Moscow

Investment Project: Energy Service in Street Lighting

Energy Service Performance Contract (ESP Contract)

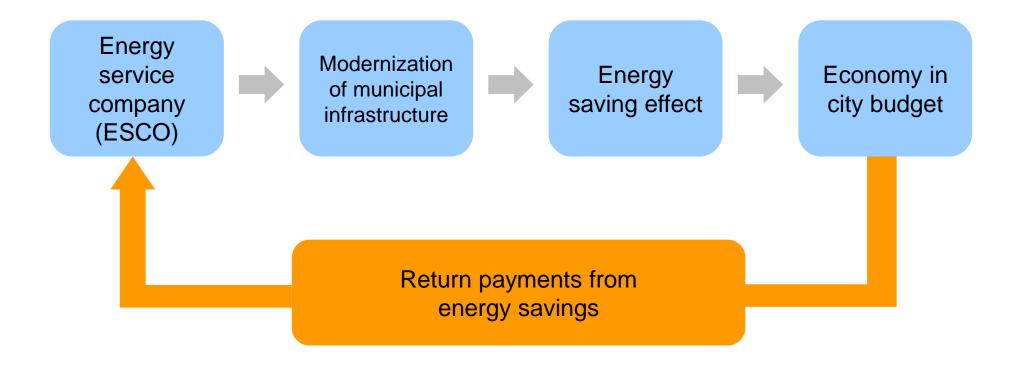


- 1 ESP Contract is introduced into Russian legislation by Federal Law N 261-FZ (2009)
- 2 ESP Contract provides modernization of municipal infrastructure at investor costs
- Local administration pays back to investor from money saving achieved through energy efficiency
- Refund to investor will be made within the contract period (5-7 years)

The city gets renovated municipal infrastructure and energy cost savings up to 50-70%

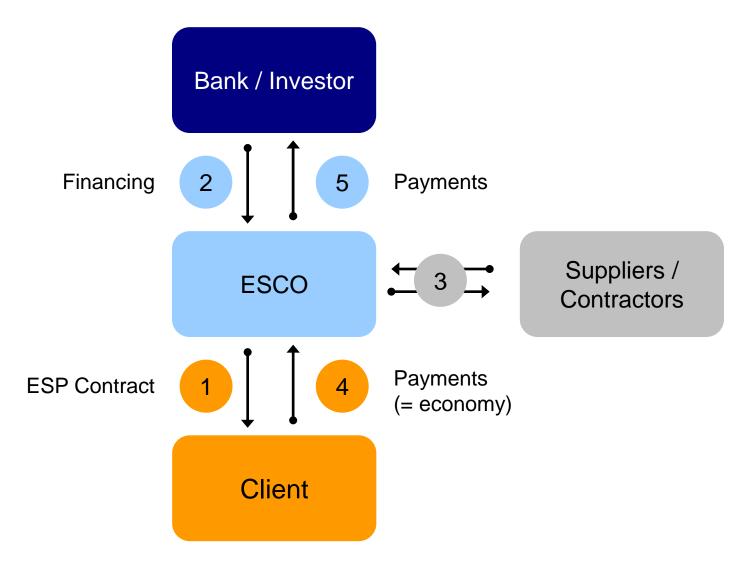
ESP Contract: General Scheme





ESP Contract: Key Parties





Market Segmentation



Cities

Street lighting

Lighting

Public buildings

On-site generation

Heating systems

other

Main customers

Source of repayment – energy baseline fixed in city budget for the term of ESP contract

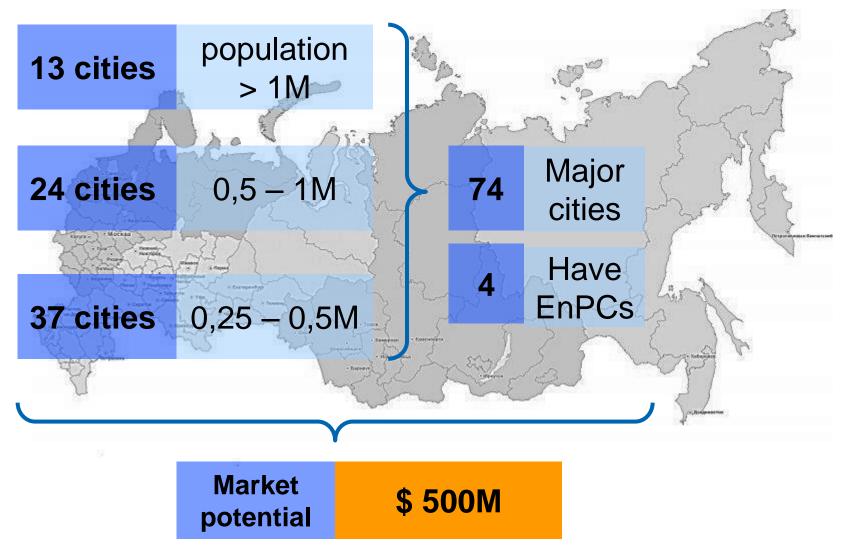
Typical Problems in Street Lighting in Russian Cities



- 1 Outdated and energy inefficient luminaries with sodium and mercury lamps
- 2 Extremely high energy consumption covered by cities budget resources
- Lack of budget funds needed for modernizing outdated lightning equipment
- Street illumination standards, regulations and rules are often partly satisfied

Market Potential in Russia

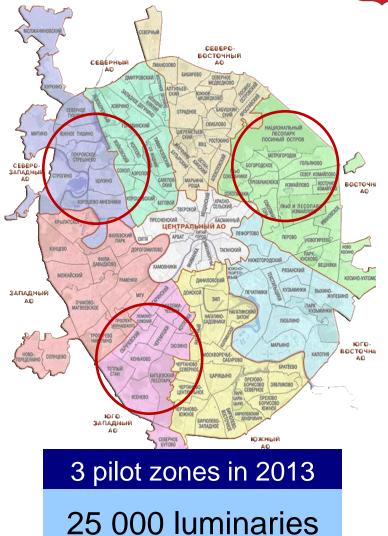




Moscow Potential



Total number of luminaries	385 000
Number of luminaries to be modernized	170 000
Moscow budget energy expenses annually	\$41M
Required investments	\$60M
Energy savings (per year)	\$17M
Term of contract	6 years
Future value	\$100M
NPV (discount rate = 14%)	\$30M



Pilot Zones: Installed Luminaries in the Selected Areas



Sodium lamps:



Mercury lamps:



3 pilot zones include:	25 000 lighting points
Annual Moscow budget energy expenses	\$2.7M
Investments in modernization	\$5M
Economy of energy (per year)	\$1.3M
Term of contract	6 years
Future value	\$7.5M



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