MINISTRY OF FOREIGN AFFAIRS OF DENMARK

THE TRADE COUNCIL

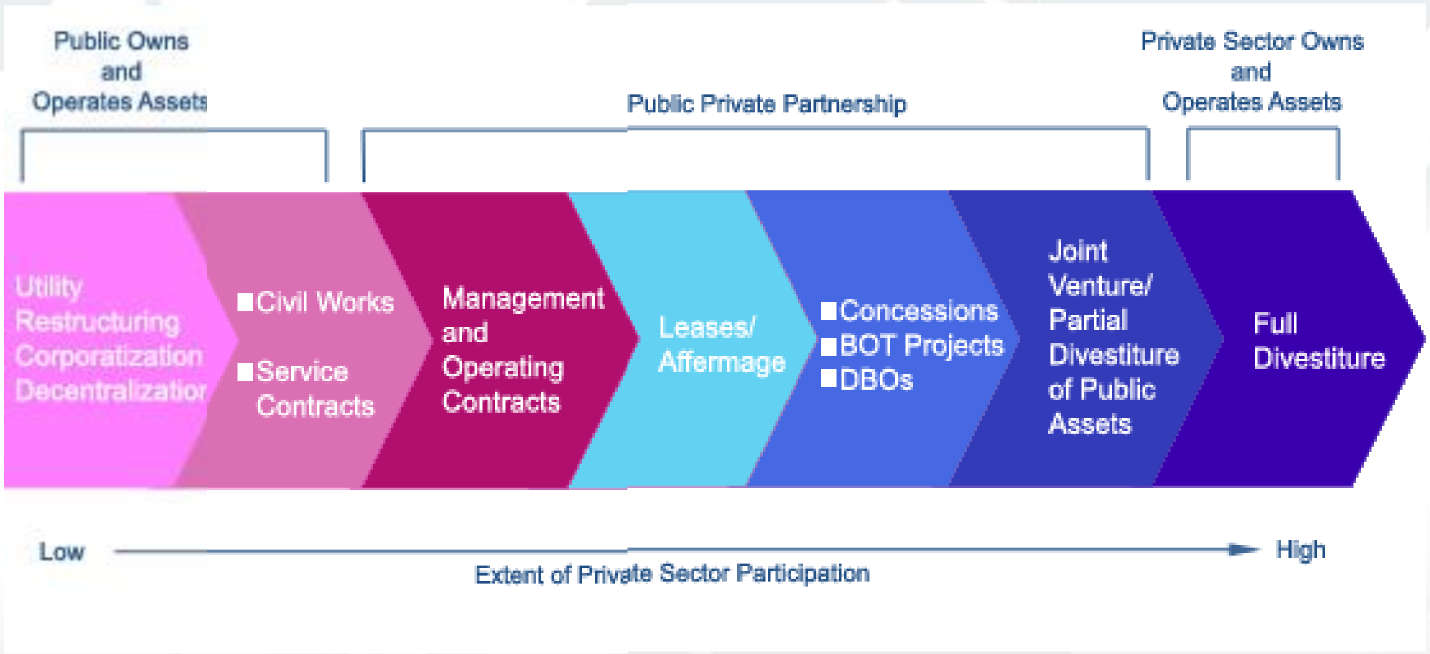
Public-Private Partnerships

Cooperating on District Energy Projects

Agenda

- Types of PPP
- Danish Experiences
- Trends in Division of labor
- ESCO and Project Financing
- Examples
  - Juneau, AK
  - Bridgeport, CN
  - Dartmouth College, NH

Types of PPP



*Source: World Bank - https://ppp.worldbank.org/public-private-partnership/agreements

Danish Experiences

- Networks
  - Primarily public (or coop) developed, owned and operated assets with private service contracts
  - Debt financed through banks with public guarantees
  - Cooperation on innovation and demonstration projects
- Plants
  - Mix of private and public owned and operated plants
  - Power traded at power exchange, anciliary services market, heat to DH
  - Various forms of financing

Trends in Division of Labor

- Project Development
  - Private developers, Utilities, Sponsors
- Construction
  - EPC vs EPCM
- Operation
  - Concessions, BOT, DBO, PPA
- Financing
  - Project finance, ESCO

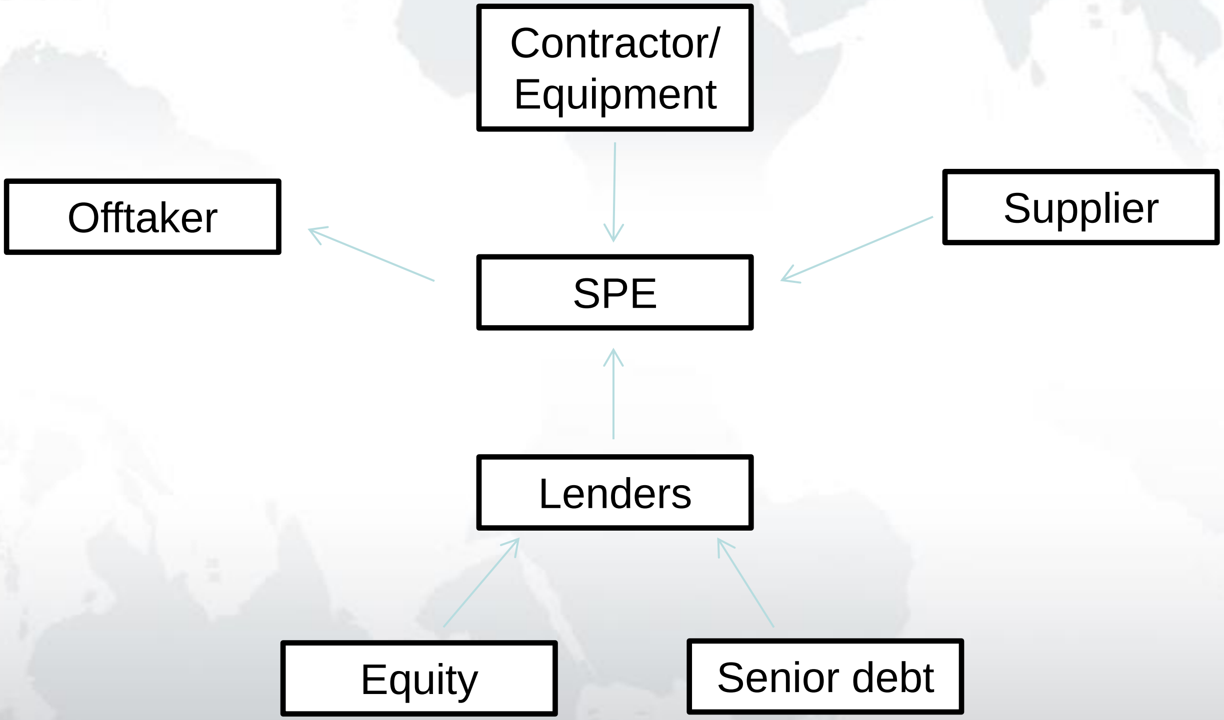
- Balancing risk and utilization of competencies

Project Finance vs. Lending on a Balance Sheet

- **Project Finance**
  - Financing based on a projected cash flow
  - Borrower is a Special Purpose Entity (SPE)
  - Security in assets and receivables
    - Strength: Lenders are in control of the activities of the borrower
    - Weakness: In a default scenario the assets of the SPE may have limited value

- **Lending on Balance Sheet**
  - Established entity
  - Lending based on credit rating of a balance sheet
    - Strength: If your project fails, you will still have the other activities (balance sheet) of the borrower to repay the loan
    - Weakness: You may have limited control of other activities, which may default the borrower

Project Finance structure



ESCO Financing & Energy Savings performance contract (ESPC)

What is it?

Partnership between Customer and Energy Savings Company (ESCO), who is responsible for identifying, designing, purchasing, installing and maintaining the authorized energy conservation measurements (ECMs).

How does it work?

ESCO guaranteed installed ECMs will generate enough savings to pay for the project financing.

The benefits!

Upon expiration of the contract term, all savings are fully realized by the customer, who is now permitted to retain 100% of the savings on the plant. The municipal customer will have no debt!

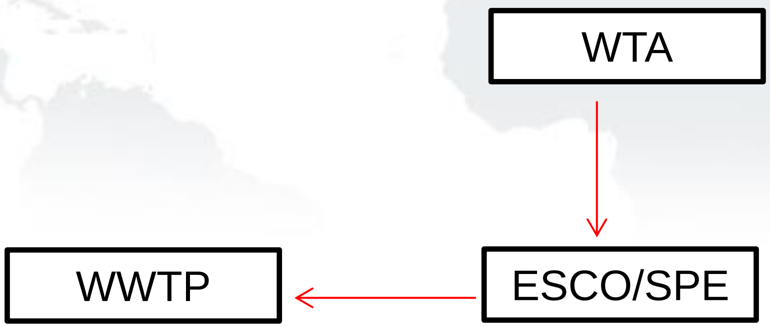
Contracts and Financing Options

- Local Government Energy Conservation Act (50 ILCS 515/) allows Local Governmental Units to enter into Guaranteed Energy Savings Performance Contracts (ESPCs) for energy conservation measures (ECMs).

- ESPCs:
  - Public Private Partnership (P3)
  - **Competitive negotiated procurement with single provider**
  - Outright purchase, capital lease, or **off-balance sheet** service contract financing alternatives
  - Provider **guarantees energy savings** to WWTP
  - Service contract financing alternative qualifies for ECA (Export Credit Agency) financing guaranty

ESCO Structure

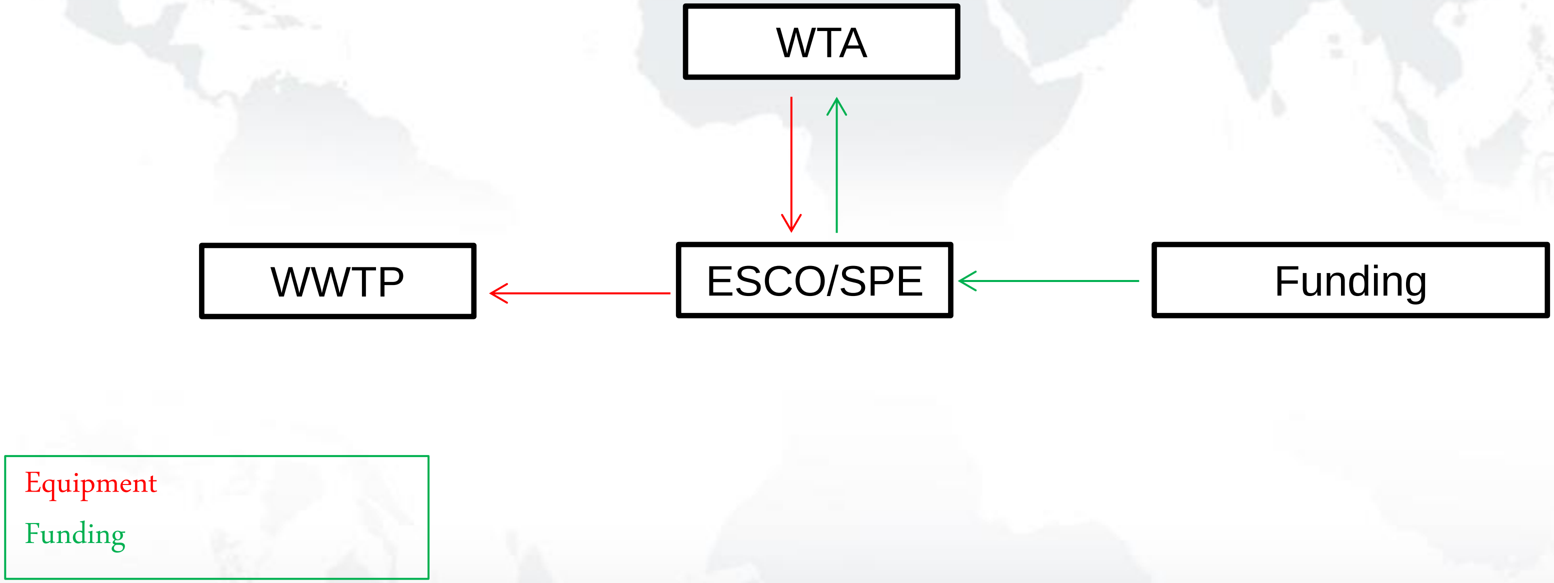
Supply, Installation and Maintainance



Equipment

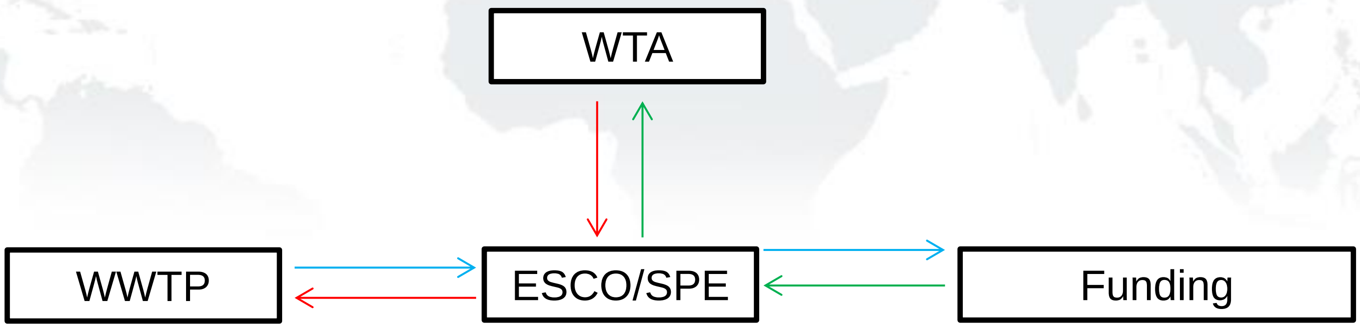
ESCO Structure

Funding



ESCO Structure

Cash Flow including Cost Savings



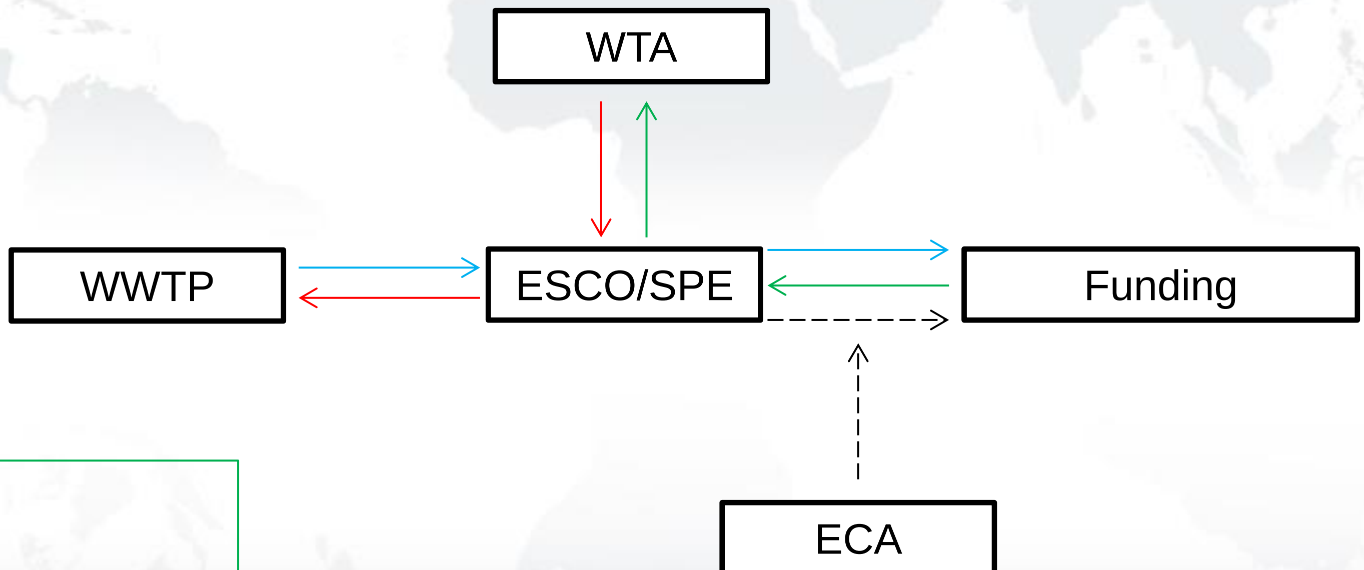
Equipment

Funding

Part of Savings

ESCO Structure

Possible AAA Government Guarantee



Equipment

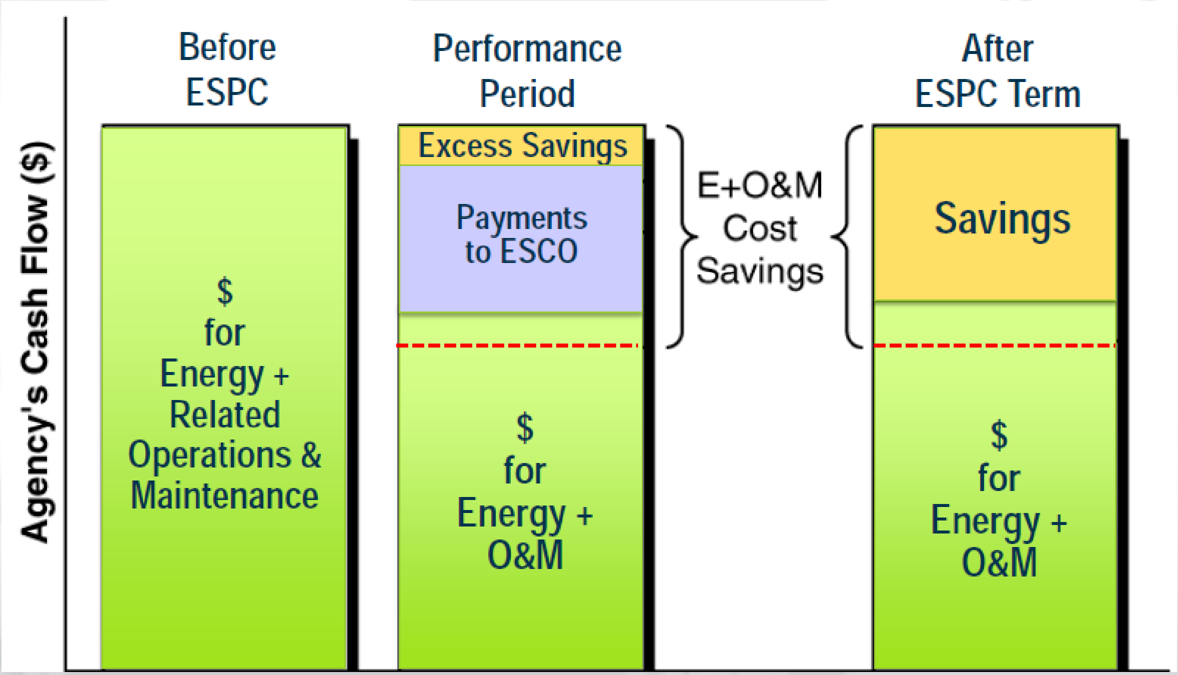
Funding

Part of Savings

Guarantee

The ESCO/ESPC Model

- *Financing retrofits by cost savings (or increase of output) based on new technology.*
- *No need for own funding.*
- Before ESPC: Baseline Energy + Operations & Maintenance (O&M) costs.
- During ESPC: Energy + O&M cost savings utilized to pay debt service, ESCO services, and any remaining cost savings are captured by customer.
- After ESPC: All Energy + O&M cost savings captured by customer.



ESCO - Customer Benefits

- ESCO’s can help customers meet existing and future utility goals and objectives.
- Secure long-term contracts: debt amortized through debt service paid from savings.
- Help manage utility costs through budget stabilization and by transferring the risk to 3rd party responsible for construction and O&M, the cost of which are included in the financing structure.
- Allow for ”off-balance sheet” accounting treatment of the payment obligations of the customer under GAAP.
- ESCO (backed by ECA) upgrades/retrofits the plants, and the utility enjoys guaranteed energy savings and reduced operating costs.

Key Take-Aways

- Plenty of interest in district heating and cooling projects
- Balancing of risk is key
- “New” ways of finance becomes more prominent
- No such thing as free money
- Seed capital for project development primary obstable

Thank you for your time!

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