PPP Days
Day 4 I Special Session

Building administrative capacity for viable PPP street-lighting projects - approach and pilots

Peter Wettengel
Partnerschaften Deutschland

Geneva, Switzerland - Friday, February 24
1. ÖPP Deutschland AG
2. Street-lighting in Germany
3. Development of a PPP model for street-lighting projects
4. Steps to implement PPP street-lighting projects
Foundation of Partnerschaften Deutschland

Milestones:
- Decision to launch the company: July 2007
- Budget approved: April 2008
- ÖPP Deutschland AG registered: December 2008
- Operational: March 2009

Our mission:
- Enhance PPP in Germany
- Neutral, independent and reliable consulting services
- Bundling of public and private sectors know-how
- Maximize efficiency gains for the public sector
Structure of ÖPP Deutschland AG

Public sector shareholders

1. Federal government
2. States
3. Municipalities

Private sector shareholders

- Contractors, suppliers, FM-companies, banks and consulting firms

Holding company *

General assembly
- (5 representatives)

Supervisory board

Management board
- (4 representatives)

* Every four years new placement of shares of the holding company
## Business fields

| Advisory | Consulting public authorities on Federal, State and Municipal level on  
|---|---|
|   |   | structuring PPP projects, preparation and supporting tendering processes  
|   |   | economic analysis, cash-flow modelling and project management  
| PPP Framework conditions | Framework conditions  
|   |   | improving framework conditions and standards  
| Know-how transfer | know-how transfer between all involved public and private parties  
|   |   | development of PPP expertise in public authorities  
| Market development | identifying new potential PPP sectors and structuring new PPP models  
|   |   | supporting policy-makers and administrations to develop these sectors  
| Communication | Information about PPP  
|   |   | via internet, political discourse  
|   |   | on events  
|   |   | via specialised press  

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PPP Days | Day 4
Advisory activities

**Federal**
- New Federal Ministry of Education and Research
- "Haus der Zukunft" Berlin
- Federal research centers and authorities
- Social Security
- Federal waterways

**States**
- Feasibility studies on specific public real estates
- Universitätssklinikum Schleswig-Holstein
- Research Institutions (feasibility studies)

**Municipalities**
- Early stage consultancy
- Public services centers (IT/services)
- PSC-tests on school projects
- Street-lighting and traffic signaling projects
## New strategic options for the public sector due to work on PPP framework conditions

<table>
<thead>
<tr>
<th>Advisory</th>
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<tbody>
<tr>
<td>Consulting public authorities on:</td>
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<tr>
<td>- Structuring PPP projects, preparation and support of tendering processes</td>
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<td>- Economic analysis, cash-flow modeling and project management</td>
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### Framework conditions / standardization

- Standard financial model for economic studies
- Benchmarking for health projects
- Payment mechanisms with incentives and controlling tools
- Success factors for PPP in IT & services

### Framework conditions

- Improving framework conditions

### Know-how transfer

- Know-how transfer between all involved public and private parties
- Development of PPP expertise in public authorities

### Market developments

- Identifying new potential PPP sectors
- Supporting policy-makers and administrations in developing these sectors

<table>
<thead>
<tr>
<th>PPP framework conditions</th>
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<tbody>
<tr>
<td><strong>Market developments</strong></td>
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<tr>
<td>- PPP street-lighting tender package</td>
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<tr>
<td>- PPP traffic-signaling tender package</td>
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<td>- PPP for kindergartens</td>
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<td>- PPP for sports-facilities</td>
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<td>- State and municipal road projects</td>
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<table>
<thead>
<tr>
<th>Know-how transfer</th>
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<tbody>
<tr>
<td>- Impact of the financial crisis on PPP real estate projects in Germany</td>
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<td>- Funding law</td>
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<td>- Transparency</td>
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<tr>
<td>- Workshops with municipalities on street-lighting</td>
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<td>- PPP for SME</td>
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PPP Days | Day 4
PPP for street-lighting
Energy saving potentials for street-lighting projects

Germany

- About 9% of produced energy in Germany is used for lighting
- Street-lighting:
  - About 9 million street-lights installed
  - Energy consumption of about 4 billion kWh per year
  - Energy saving potential up to 80% in average about 45%
- The average 45% saving potential equals
  - 1.8 billion kWh per year which is more than 300 million EUR year
  - 1.035.000 t CO₂ per year (assumption 575 g CO₂ /kWh for existing power-mix)
- Further saving potentials from operation and maintenance procedures

Europe

- About 56 million street-lights
- About 18 million on a 1930`s standard
Street-lighting in Germany

- Great investment needs
- High saving potentials in energy and CO2-emission (in average about 35 % in some cases up to 80 % of energy consumptions)
- Lots of old street-lighting facilities (30% of about 9 Mio. street-lighting facilities are from the 1970`s or older)
- There are already projects similar to PPP (e.g. Bremen, Gera, Hagen)
  > Main differences are property rights of assets, risk-transfer, payment-mechanisms, contract period and the transfer of energy supply
- In September 2010 a PPP tender package was published by ÖPP Deutschland AG for street-lighting including all necessary tender documents for a municipal street-lighting project (lighting-concept, installations, finance, operation, maintenance, energy-supply over a period of 15-20 years)
Development of the Street-lighting procurement package

Phase I
- Analysis of framework conditions
  - Framework conditions
  - Funding schemes
  - Analysis of different tendering options
  - Stakeholder analysis

Phase II
- Development of PPP-model
  - Economic, legal, technical key-elements
  - Transfer of services, risk allocation
  - Definition of interfaces
  - Key-elements of service-qualities, payment-mechanisms
  - Contractual and organizational model
  - Description of tendering procedures

Phase III
- Development and publication of procurement package
  - Know-how transfer with public and private sector stakeholders
  - Development of the tender package
  - Report and other documentation of the results
  - Presentation and publication of all information and the procurement package

Integration of external legal and technical advisors
Schedule

- Contract signed with Ministries  12/2009
- Kick-off phase I  01/2010
- Results of phase I presented to the ministries  04/2010
- Tendering external advisory services  04/2010
- Kick-off workshop with external advisors  05/2010
- 3 half-day workshops with external advisors  
  > Model workshop on key elements of the PPP-model  
  > Small projects and status of the documents  
  > Final workshop on the procurement package  
- Final presentation to the ministries  08/2010
- Publication of the procurement package  09/2010
PPP-model for street-lighting in Germany

- Authority
  - PPP-contract
  - SPV
    - Supply, construction, operation and maintenance contracts
- Shareholder agreement
- Bank
  - Lending agreement

Large projects: debt finance of replacements and new installations
Small projects: replacements and new installations financed by cash-flow

Large projects: > 8.000 street-lights
Small projects: 3.000 – 8.000 street-lights
Key elements of the PPP street-lighting model

- Contract period of 20 years (15 years for small projects)
- 5 years core investment-period for large projects (no investment-period for small projects)
- For small projects replacements are financed from annual payments by the authority
- Operation and maintenance of facilities
- Energy supply
- Ownership of existing facilities remain with the municipality
- Transfer of ownership of new assets to municipality once they are operational
- Need for documentation of existing facilities, technologies, age and their status
- Output-based specification
PPP street-lighting model for large projects (> 8,000 street-lights)

- Pre-financing
- Annuity financing
- Major replacements during core investment-period
- Replacements and new installations from monthly payments
- Operation, maintenance and energy supply
- Investment-period (5 years)
- O&M-period (20 years)
- End of contract

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Risk transfer of PPP street-lighting model

**Municipality**
- Price risks of energy, personal, material
- Changes in tax-regulation
- Change of legal and technical standards
- Vandalism above a fixed annual amount
- Costs of accidents above a fixed annual amount

**Private partner**
- Energy consumption-risks
- Planning risks
- Effects of delay and cost overruns
- Financial risks
- Availability of facilities
- Operation and maintenance risks
- Vandalism up to a fixed annual amount
- Costs of accidents up to a fixed annual amount
Procurement package for street-lighting

- The following documents are included in the procurement package:
  > Process documents for
    - Project preparation
    - Pre-qualification
    - Invitation to tender
    - Scoring matrices for PQ and bids
    - All standard letters
  > Tender documents for
    - Pre qualification (Memo, standard form for application, scoring-matrices, …)
    - Bid preparation (Memo, standard contract, price-sheets, output-specification, standards catalogue, …)
## Procurement package for large projects

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Bezeichnung des Dokuments</th>
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<tbody>
<tr>
<td></td>
<td>Vorbereitung Vergabeverfahren</td>
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<td>V1 (g)</td>
<td>Anforderungen Bestandsdokumentation</td>
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<td>Teilnahmwettbewerb</td>
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<td>T 1 (g)</td>
<td>Auftragsbekenntnmachung</td>
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<td>T 2 (g)</td>
<td>Bewerberinformation</td>
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<td>T 3 (g)</td>
<td>Teilnehmerformular</td>
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<td>T 4 (g)</td>
<td>Formblätter Auswertung Teilnahmeanträge</td>
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<td>T 5 (g)</td>
<td>Absageschreiben Teilnahmwettbewerb</td>
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<td>Angebotsaufforderung</td>
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<td>A 1 (g)</td>
<td>Angebotsaufforderung</td>
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<tr>
<td>A 2 (g)</td>
<td>Eckpunktepapier</td>
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<tr>
<td>A 3 (g)</td>
<td>Bieterinformation</td>
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<td>A 4 (g)</td>
<td>Beleuchtungsvertrag Malusregelungen</td>
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<td>A 4 (g)</td>
<td>Beleuchtungsvertrag</td>
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<td>A 5 (g)</td>
<td>Formblatt Bieteranmerkungen Wirtschaftl. Dokumente</td>
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<td>A 6 (g)</td>
<td>Formblatt Bieteranmerkungen Rechtl. Dokumente</td>
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<td>A 7 (g)</td>
<td>Formblatt Bieteranmerkungen Techn. Dokumente</td>
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<td>A 8 (g)</td>
<td>Angebotsformular</td>
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<td>A 8 (g)</td>
<td>Leitsätze für die Preisermittlung</td>
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<td>A 9 (g)</td>
<td>Formular Erneuerungskosten</td>
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<td>A 10 (g)</td>
<td>Formular Betriebskosten</td>
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<td>A 11 (g)</td>
<td>Formular Energiekosten</td>
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<td>A 12 (g)</td>
<td>Formular Instandhaltungskosten</td>
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<td>A 13 (g)</td>
<td>Formular Finanzierung</td>
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<td>A 14 (g)</td>
<td>Formular Plan Konto Erneuerung und Instandhaltung</td>
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<tr>
<td>A 15 (g)</td>
<td>Formular Neubau Rückbau Umbau Änderung</td>
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<td>A 16 (g)</td>
<td>Vertragserfüllungs bürgschaft</td>
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<td>A 17 (g)</td>
<td>Technische Beschreibung Anlagenbestand</td>
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<td>A 18 (g)</td>
<td>Outputspezifikationen Bauliche Standards</td>
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<td>A 18 (g)</td>
<td>Outputspezifikationen Betriebsmanagement</td>
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<td>Outputspezifikationen Leuchtenkatalog</td>
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<td>A 19 (g)</td>
<td>Bewertungsmatrix Angebote</td>
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<td>A 20 (g)</td>
<td>Formblatt Angebotsauswertung</td>
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<td>Absageschreiben</td>
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<td>A 22 (g)</td>
<td>Zuschlagsschreiben inkl. Anschreiben</td>
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Success factors for PPP street-lighting

- Project size (investment volume and number of lights)
- Average age of equipment
- Specific energy consumptions
- Political willingness for PPP-delivery
- Positive experiences of the municipality with PPP e.g. with schools
- Role of Stadtwerke or current contractor
- Access to funding schemes
- Possible bundling with other municipalities or services (traffic-signaling, telematic-systems, parking-systems, IT-systems)
- Defined energy- or CO₂-saving-targets of the municipality
Steps to implement PPP street-lighting projects

<table>
<thead>
<tr>
<th>2010</th>
<th>2011</th>
<th>…up to now</th>
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<tbody>
<tr>
<td><strong>September</strong></td>
<td><strong>October</strong></td>
<td><strong>November</strong></td>
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<tr>
<td>Documents</td>
<td>Press announcements,</td>
<td>Workshops with</td>
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<td>Meetings &amp; interviews</td>
<td>municipalities</td>
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<td>with press &amp; media,</td>
<td>(so far 4 National</td>
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<td></td>
<td>PPP street-lighting</td>
<td>workshops, workshops</td>
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<td></td>
<td>web page, conferences</td>
<td>in Warsaw and Berlin</td>
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<tr>
<td>Workshops / road-show</td>
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<td>(EPEC))</td>
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<td>Advisory acitivities</td>
<td>Workshops with</td>
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<tr>
<td>e.g. support tender</td>
<td>municipalities</td>
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<tr>
<td>preparation and</td>
<td>Early stage advisory</td>
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<tr>
<td>tendering process as</td>
<td>for several</td>
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<td>external advisor of</td>
<td>municipalities and</td>
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<tr>
<td>municipalities</td>
<td>street-lighting pilot-</td>
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<tr>
<td></td>
<td>projects</td>
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</table>

Report with data CD (tendering package), presentation, fact-sheet

Marketing concept
ÖPP-Beleuchtungsprojekte

Erläuterungserbricht zum ÖPP-Beleuchtungsmodell sowie zu den erweiterten Mustererweiterungsmöglichkeiten für kleine und große Beleuchtungspakete.

Partnerschaften Deutschland
ÖPP Deutschland AG

www.partnerschaften-deutschland.de/verdingungsunterlagen-beleuchtung

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Thank you for your attention!

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