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Beyond Transition: Building Secure, Resilient, Inclusive, and Intelligent Energy Systems

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ADB

Next Generation Energy Systems in Central, West and East Asia: Technology, Markets and Regional Integration

Partnering for Warmth: Private Sector Participation in Uzbekistan's District Heating Transformation

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ADB

How ADB supports infrastructure projects

	Sovereign Financing	OMDP (PPP Advisory)	Nonsovereign Financing
Counterpart	National and subnational governments, public sector entities	Primarily governments (ministries, agencies, PPP units)	Private sector (project companies, corporates, SOEs, financial institutions)
Instruments	Loans (project, policy-based, RBL, MFF), grants, technical assistance	Transaction advisory services (project structuring, PPP design, market sounding, tender support)	Debt, equity, guarantees, syndications, blended finance
Objective	**Support public investment**, policy reform, and enabling environment	**Prepare bankable projects** and pipeline, and mobilize private sector participation	**Finance commercially viable investments** and mobilize private capital at scale

ADB OMDP's Services

Capacity Building
Enabling Environment

Raise awareness, enhance government capacity, establish policies and frameworks, identify potential projects, and provide support to facilitate Public-Private Partnership (PPP) development

Project Preparation and Transaction Advisory Services

Assist in designing and preparing bankable PPP projects through **transaction advisory services** and continuously share knowledge sharing and support to enhance the enabling environment for private sector investment

Project Monitoring

Provide post-commercial close support for contract management and project monitoring to ensure successful implementation of the PPP projects we advise.

Transaction Advisory Services

TAS is a fee based advisory services to assist in structuring and procuring viable PPP projects that covers a full range of activities:

1. Project Conceptualization

- Alignment and scope definition based on current conditions

2. Preparation & Marketing

- Technical feasibility study
- Market analysis and sounding (potential operators)
- Government approval documentation

3. Bidding Process

- Prequalification (if needed)
- Request for proposals, including agreements, pre-bid conferences
- Proposal/bid evaluation

4. Contract Award

- Contract negotiations
- Signing of agreements

5. Financial Close Support

- Review financing plans, agreements
- Advice on conditions precedent compliance

6. Project Monitoring Support

- Performance monitoring and reporting
- Amendments to agreements

Achievements and recognition

ADB has supported over 90 PPP projects as an advisor in 25 countries. 17 projects have reached commercial closure, with $4.3 billion private capital mobilization

2022 Winner
Public Sector Procurer of the Year
PPP Development Agency (PPPDA)
under the Ministry of Finance
of the Republic of Uzbekistan

2023 Winner
Best in Utilities
Namangan Wastewater Treatment
Plant under the Ministry of Finance
of the Republic of Uzbekistan

2024 Winner
Best in Utilities
Utility-Scale Solar Photovoltaic plus
Battery Storage Project, under the
Ministry of Energy, Uzbekistan

2024 Winner
Transport Deal of the Year
Ninoy Aquino International Airport
PPP project, Philippines

2021 Judges' Choice Award
Transport Project of the Year
Dhaka Bypass Road PPP
Project, Bangladesh

2022 Finalist
Best Utilities Project
457 MW Sherabad
Solar PPP, Uzbekistan

2022 Highly Commended
Best Utilities Project
Tashkent District Heating Project,
Uzbekistan

2023 Highly Commended
Best Utilities Project
Dili Solid Waste Management
in Timor Leste

2023 Finalist
Best Utilities Project
National Solar Park, Cambodia

Tashkent District Heating Project

Project and Mandate Overview

Country	Uzbekistan	**Name of Private Partner**	Veolia Energy Tashkent
Sector	Energy	**Project Size**	Eur 1.4 billion
Name of Public Sector	Tashkent City Municipality (TCM)	**Timeline**	26 months to Commercial Close
		Commercial Close	2021
		Financial Close	2022

Project Background and Description

❖Tashkent City Municipality (TCM) received an unsolicited proposal (USP) for the refurbishment and long-term operation of Tashkent City District Heating (DH) Network, implemented as a privately-initiated project under the Public-Private Partnership (PPP) Law with technical assistance from ADB's Asia Pacific Project Preparation Facility.

Scope of Work

❖Transaction Advisor for TCM, providing assistance in project structuring, tender preparation, negotiation, commercial closing support, and project monitoring for the project's implementation.

Key Structuring Points

❖In this hybrid PPP structure, the private partner manages the network, bill invoicing and collection, with modernization funded from collected tariffs and government support for tariff affordability.

❖The public partner finances the Modernization and Public Investment Programs through a dedicated fund established solely for the project within TCM.

Impact

❖The project reconfigures the open network to an integrated heat supply scheme, enhancing safety and achieving gas, energy, and water savings of 25 - 40%.

❖By introducing metering devices, it promotes awareness of sustainable energy usage among citizens and local businesses, supported by a $20 million private sector investment.

History of ADB's PPP Support in Uzbekistan

- ADB started PPP dialogue with the government

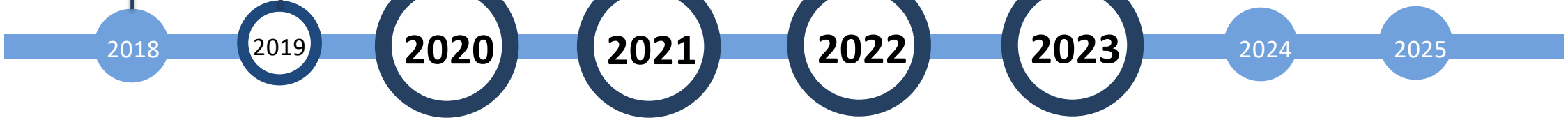
- Law on Public-Private Partnership adopted
- ADB's first Technical Assistance for capacity building

- **Support for PPP Law Amendment** started

- **Tashkent District Heating** commercial close
- **Sherabad Solar Project** commercial close.
- **PPP Law Amendment** came into effect

- **Namangan Waste Water Treatment Project** commercial close

- **Guzar Solar Project** commercial close



- ✓ *First-hand experience in PPP provided to government officials*
- ✓ *Early project bid documents and PPP contracts now act as templates*
- ✓ *PPP Law amended to reflect lessons through project implementation.*
- ✓ *Investor confidence strengthened*

Transformation needed in Uzbekistan's heating sector

Aging assets

Open systems, worn networks, and outdated boiler and pipe infrastructure drive high technical losses.

Efficiency gap

Heat, water, electricity, and gas are used inefficiently when systems cannot regulate flow and demand properly.

Utility stress

Tariffs and collections have historically not provided the financial basis needed for sustained modernization.

- Many district heating systems were built in the 1950s–70s and are now technically obsolete and under-invested.
- Tashkent's centralized system was developed for roughly 1 million people but now must serve a city of around 3 million.
- Close to 40% of heat produced is lost because of aging infrastructure and outdated system design.
- Below-cost-recovery tariffs, weak operational management, and limited maintenance investment have undermined service quality and financial sustainability.

Tashkent District Heating Project

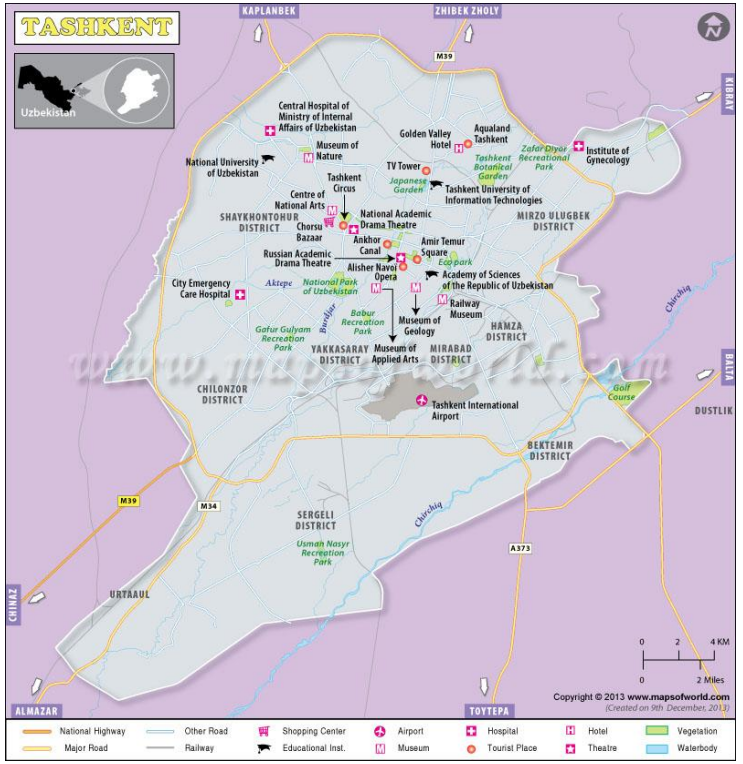
2019
ADB transaction advisory mandate

2020
Unsolicited proposal + market test

2021
30-year PPP signed

2022+
Pilot rollout

- ADB supported Tashkent City Municipality in structuring an innovative district heating PPP between 2019 and 2022.
- The project uses a 30-year affermage model with Veolia Energy Tashkent for operation, maintenance and modernization.
- The revamped system shifts from open to closed heat supply, as one of the first such transitions in Central Asia.
- Pilot has been rolled out in Sergeli and Bektemir since 2022, creating an early proof point for wider reform.



Project results (preliminary)

The PPP combined operating discipline, network redesign, automated substations, and metering to generate measurable early results.

44.3% → 33.6%
Heat loss reduction between 2022 and 2024

29m m³
Water consumption reduced

49.6m kWh
Electricity consumption reduced

225m m³
Natural gas consumption reduced

458 bn sum
Estimated savings reported for 2022–2024

Service and behavior change
Smart metering, regulated heat delivery, and better fault detection

- Pilot modernization covered 118 apartment buildings and 43 social facilities in the first phase.
- Technical audit of the city heat supply system completed
- The model demonstrates that municipal utility PPPs can improve outcomes through better operations and phased technical modernization.

Lessons from the Tashkent Project

Regulatory Framework Challenges

Tariffs remain below full cost recovery, while subsidy mechanisms are incomplete and not fully structured. This creates persistent funding gaps, limiting investment and undermining long-term service sustainability.

Ecosystem Integration

Successful PPP depends on complementary upgrades beyond project boundaries, including municipal water and building systems.

Customer Interface Complexity

Direct engagement with apartment users increased administrative burden; alternative building management approaches had limited capacity.

Pilot-based implementation helps de-risk scale-up

Phased rollout creates evidence, improves technical design, and builds confidence for replication in other cities.

From proof point to pipeline – Bukhara District Heating PPP

- Based on the progress with the Tashkent project, the government is pursuing a PPP model for improving the district heating system in Bukhara
- The project is being structured as a Design–Build–Finance–Operate–Maintain (DBFOM) PPP to modernize aging open-loop district heating systems in Bukhara and Kogon.
- Private scope includes a new gas-fired CHP plant (~14 MWth / 15 MWe), rehabilitation of boiler houses, network modernization, closed-loop conversion, individual substations, smart metering, and advanced controls.
- The public partner scope covers internal building systems and water supply upgrades.

Indicative project footprint

22,066
apartments

518
multi-family residential buildings

59
non-residential buildings

20–30%
planned demand growth capacity

From proof point to pipeline – Bukhara District Heating PPP

Lesson from Tashkent	How it is being applied in Bukhara
Clearer project definition	The Bukhara project is much more manageable in size and the scope is clearer at start, leading to clearer delineation of responsibilities between public and private partners
Integrated modernization works better than piecemeal repair	The concept bundles CHP, boiler houses, network upgrading, closed-loop conversion, substations, metering, and controls into one modernization program as opposed to ad-hoc repairs and maintenance done so far
Market development requires dialogue with investors	Tashkent project showed that market testing can lead to stronger results. Integrated PPP solution to heating is untested in Uzbekistan and the Bukhara project will help build a foundational reference point
Tariff and regulatory issues as one of the key issues	Finding a methodology acceptable to local regulations and practices as well as providing comfort for investors