



Expanding Service Area of a Utility

A case study from Palestine

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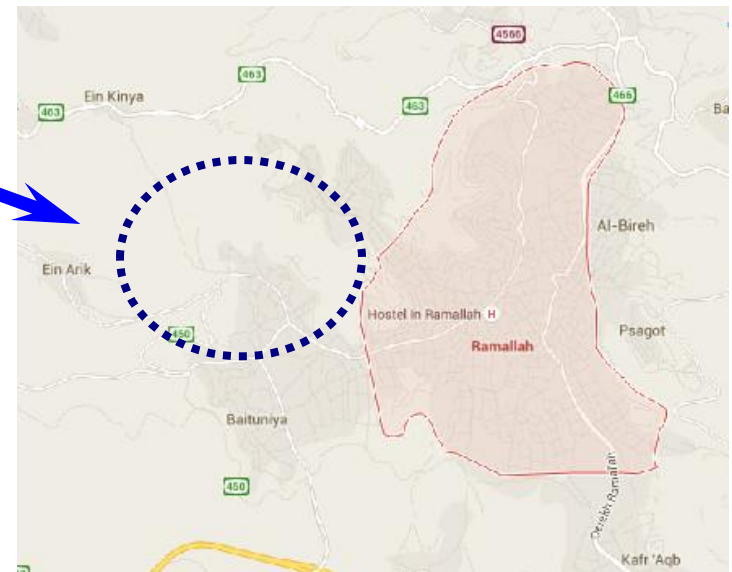
Torino – Italy
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The Beta Area



PALESTINE

STUDY AREA



The Problem

- JWU is a well-performing public water utility.
- Beta area is part of the JWU jurisdiction but still responsible for its own water service due to historical/political aspects.
- Water network of Beta is deteriorated, water loss is high, supply is intermittent, customers are dissatisfied.
- Beta has less access to credit, grants...etc compared to JWU.

The Proposal

Add Beta area to the service area of JWU and make a complete renewal of the water distribution network.

Field Analysis

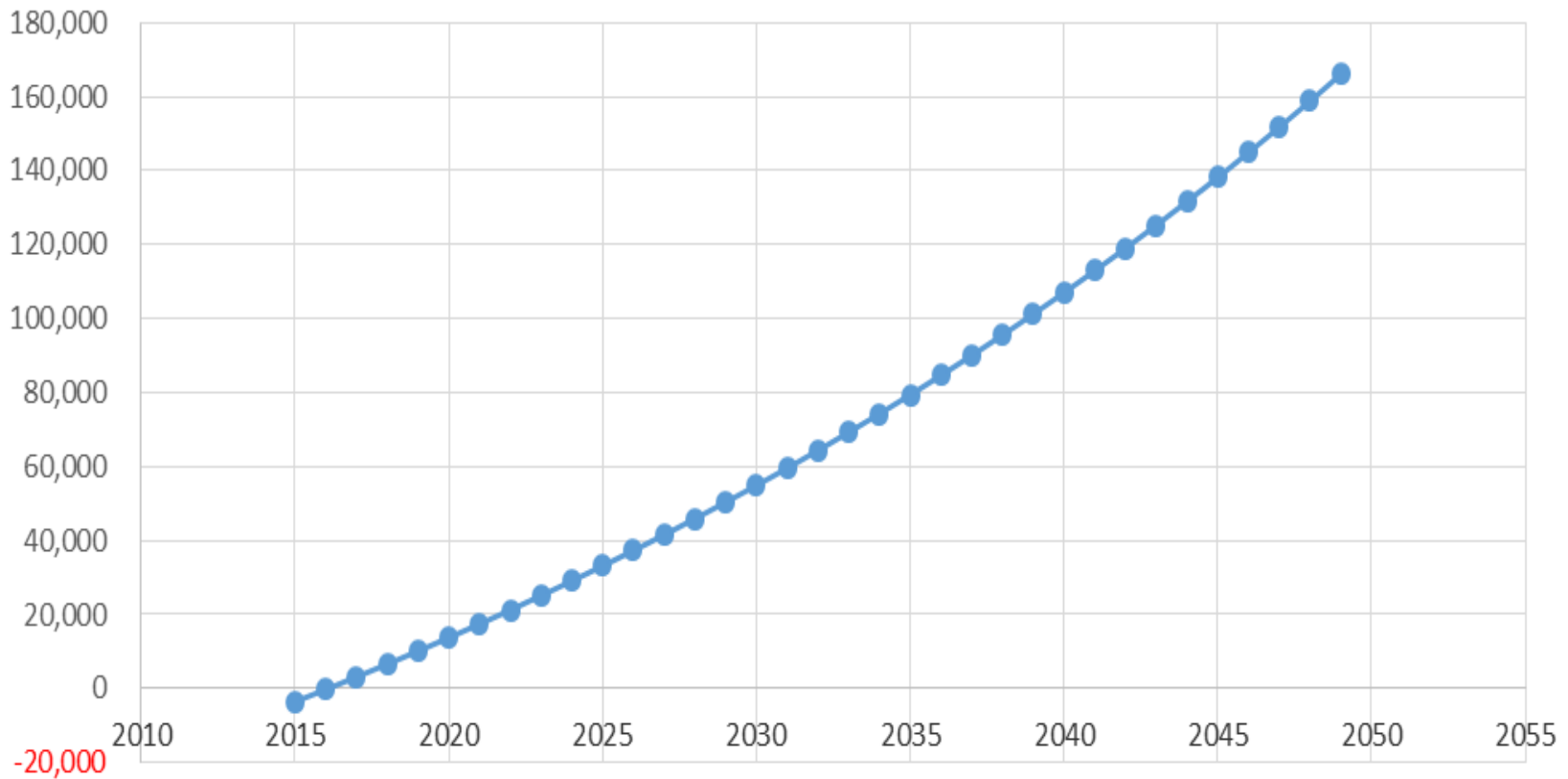
Players		Information A: Demand B: Cost of service C: Investments D: Revenues	Incentives	Key Relations
Politicians and public officials	City Council (CC)	A	Elections, equity, access to good service.	CC→BoD (appointment)
	Board of Directors of JWU (BoD)	A,B,C,D	Equity, quality of service, financial viability/ budget/ cost leverage.	BoD→C (market power)
	Government (G)	A,B	Enforcement of law, elections, equity.	G→CC (command and control)
	Political Parties (PP)	None	Elections, Political control.	PP→G PP→CC (Lobbying and influence)
Creditors	Bank (\$\$)	B,C,D	Profit, cash flow.	\$\$→BD (Business)
Consumer Protection Organizations (CPO)		None	Equity, quality of service, power	CPO→BoD (Lobby pressure)
Consumers (C)		None	Affordability, access to service, quality of service, equity.	C→BoD (elections) C→CPO (lobbying)

Basic Data and Assumptions

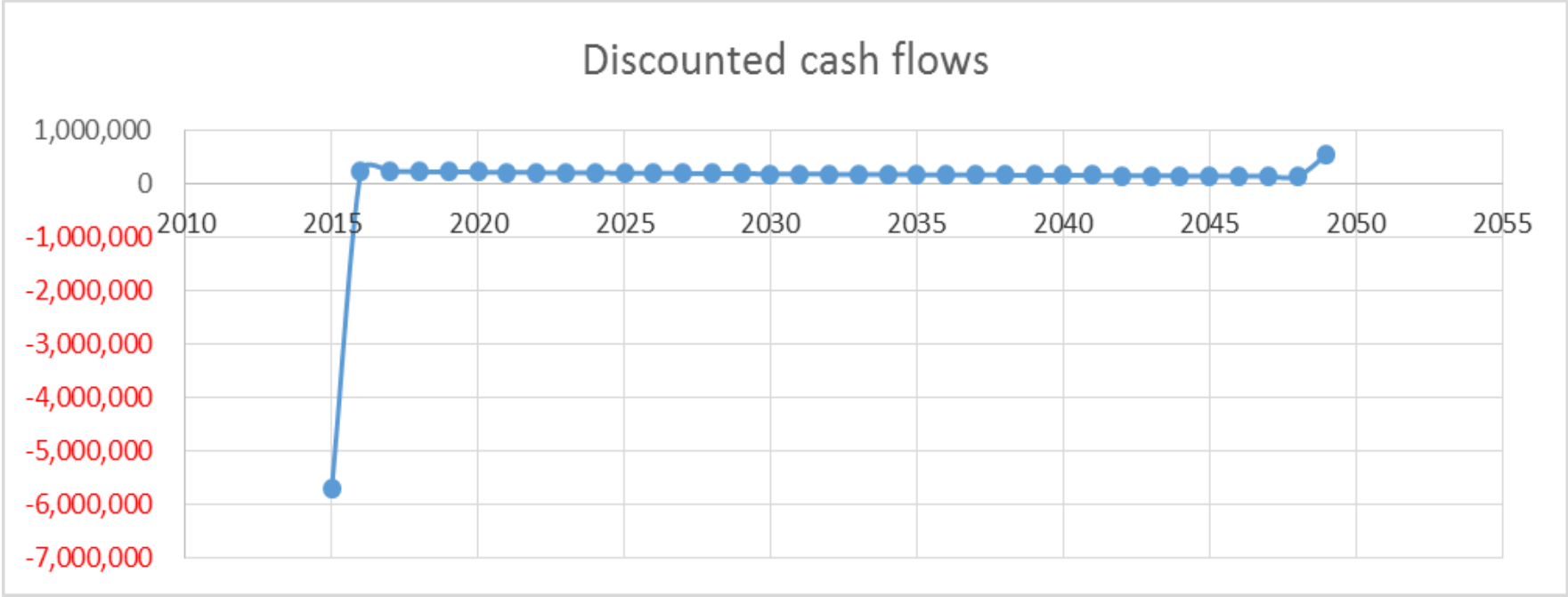
Variable	Unit	Value
Length of the network	Kml	200
Investment cost	Eur	6,000,000
Loan finance	%	70
External grant finance	%	30
Cost of borrowing	%	3
Annual growth in revenues	%	1
Annual growth in costs*	%	1
Useful life of the investments	Year	35
Tax**	%	0
Population of Beta area	No	22,000
Water consumption	L/C/D	80
Total operating costs in year 1	Eur	648,000
Population in JWU area before Beta	No	320,000
Average tariff in JWU area	Eur	1.3
Average tariff in Beta area	Eur	1.5
Population of Beta area in relation to JWU	%	6.875
Collection efficiency in Beta area-status quo	%	70
Collection efficiency in Beta area-after the project	%	85
Working capital in relation to revenues	%	3

Results of Operations

Annual Results



Cash Flow



Equity / Affordability

Affordability calculation:		
Average household members*	5.6	Person
Daily consumption	80	Liters
Consumption per month	13440	Liters
Consumption per month	13.44	M3
Proposed price	1.2	Eur
Total bill	16.128	Eur
Average household income	600	Eur
% of household income	2.69%	
* Palestinian Central Bureau of statistics, 2012		

Conclusions

- The project is financially **viable** to the operator and creditor (operating surplus, positive cash flows)
- Average **tariff** is lower than the previous tariff (1.2 vs. 1.5).
- **Quality** of service will improve substantially.
- Customer **satisfaction** and willingness to pay is expected to rise from 70% to 85%.

Thank you !

