

New Developments in P3



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TDA Annual Conference 2014

Topic

Introduction

What is P3?

Texas P3 Legislation

Public & Private Participation in a P3 Project

TWDB & SWIFT + SPP

What is a BOO(T) Form of Contract & how does it fit with P3?

Pricing

P3/BOO Case Study

Summary/Conclusion

Fast. Affordable. Reliable.

💧 What is P3?

💧 **Public & Private sector project collaboration to:**

- 💧 share project risk
- 💧 ensure best practices
- 💧 & provide optimal benefit for the end users (the rate payers).

💧 Texas P3 Legislation

- 💧 The Public and Private Facilities and Infrastructure (PPFI) Act Texas Government Code Sec. 2267.001 *et seq.* was signed & became effective on September 1, 2011 – i.e. over three years ago.

- ◆ Range of Public & Private Participation in a P3 Project
 - ◆ Primary variables are:
 - ◆ the source of project financing
 - ◆ how involved the Public sector wishes to be
 - ◆ Typically, the Private sector provides 100% of the project financing
 - ◆ In Texas, there is the TWDB 'SWIFT' (& others) which could enable the Public sector to partially fund a project
 - ◆ E.g. the Public sector could finance the 'standard' general civils works whilst the Private sector finances the high risk element of the project (RO plant)

- P3 + SPP (State Participation Program)
 - For **new water supply projects &/or state water plan projects**, this TWDB-managed program can fund **up to 80% of project costs** if the local entity or P3 partner finances the difference
 - Applies to works that can be over-sized for future demand projections

- What is a BOO(T) Form of Contract & how does it fit with P3?
 - **Build-Own-Operate (Transfer)** is a form of P3 with minimal effort & resources required from the public entity
 - The private sector finances, designs, builds, owns, operates & maintains the assets for an agreed period of time - normally around 15 years for a water sector project
 - The assets are either removed, or transferred to the public entity, at the end of the contract period

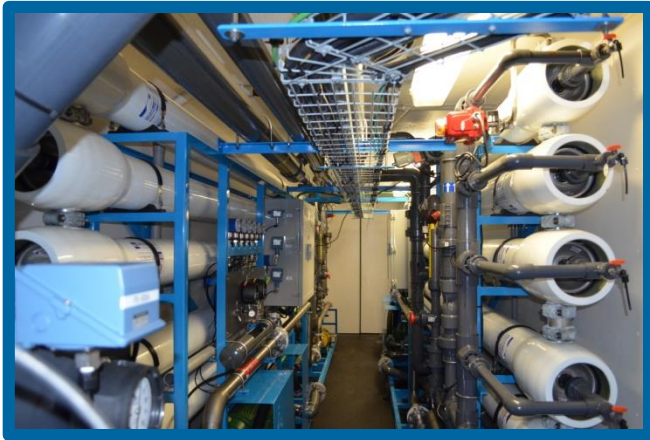
💧 Pricing

- 💧 In P3/BOO, the contractor gives a **unit sales price** to the client for contractual quantity & quality
- 💧 The **unit price includes all costs**: finance, permitting, design & construction, operation & maintenance, & profit
- 💧 Benefit to the client: **all risk & effort is passed to the private sector** & the monthly cost is a fixed & known value

- 💧 Pricing – the relative cost of Desal
 - 💧 The next source of water is **more expensive** than existing sources
 - 💧 The next source of water will supplement the existing supply to give a new '**blended cost**' for the rate payer
 - 💧 Advances in desal technology, particularly in membrane efficiency & energy recovery, over the last decade have been significant

- 💧 Refinery in the Caribbean
- 💧 Government entity has a BOO contract with the refinery to supply power, water (demin), steam, & air
- 💧 Existing thermal units were breaking down & so switched to RO
- 💧 In the first instance, client purchased a skid-mounted RO unit
- 💧 Then bought another one
- 💧 Then contracted SSW on a BOO basis
- 💧 Then bought another larger one - & then asked SSW to take it over

P3/BOO Case Study 2



Fast. Affordable. Reliable.



P3/BOO Case Study 3



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P3/BOO Case Study 4



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P3/BOO Case Study 5



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P3/BOO Case Study 6



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P3/BOO Case Study 7



ALARM SUMMARY

DATE	TIME	DESCRIPTION
04/27/2013	01:47:51	SWRO#1 2B-FIT-201 Low Low Permeate Flow
04/26/2013	19:30:25	SWRO#1 2B-AIT-202 Permeate Conductivity Sensor Fault (AIT-202)
04/26/2013	19:30:25	SWRO#1 2B-AIT-206 Concentrate Conductivity Sensor Fault (AIT-206)
04/26/2013	12:38:18	09-TF-701 CIP Tank - Level Low Alarm

SWRO# Data Close

PRESSURE		CONDUCTIVITY		FLOW	
PRE-FILTER (FIT-201)	0.0 bar	INLET (AIT-204)	53.0 uS/cm	LF ERO FEED (FIT-200)	0.1 m3/hr
POST-FILTER HP PUMP INLET (FIT-202)	0.0 bar	PERMEATE (AIT-203)	0.0 uS/cm	BOOST PUMP INLET (FIT-205)	0.0 m3/hr
DIFFERENTIAL FILTER (CPA-201)	0.0 bar	CONCENTRATE (AIT-206)	0.0 mS/cm	PERMEATE (FIT-207)	0.0 m3/hr
PRIMARY (FIT-203)	0.0 bar	REJECTION (AIT-203)	100.0 %	CONCENTRATE (FIT-202)	0.0 m3/hr
FINAL (FIT-205)	0.0 bar			INLET (FIT-101)	0.0 m3/hr
DIFFERENTIAL MEMBRANE (CPA-202)	-0.1 bar			LUBRICATION (TY-220)	-0.1 m3/hr
BOOST PUMP INLET (FIT-206)	0.0 bar			RECOVERY (FEI-301)	0.0 %
DIFFERENTIAL HP ERO (CPA-205)	-0.0 bar				
LF ERO OUTLET (FIT-200)					
DIFFERENTIAL LF ERO					
HIGH PRESSURE					
SENSOR A (FIT-201)					
SENSOR B (FIT-202)					
SCREEN SE					

TEMPERATURE		HIGH PRESSURE PUMP MOTOR TEMPERATURE	
INLET (TIT-202)	28.6 °C	A (TT-201A)	28.1 °C
		B (TT-201B)	28.3 °C
		C (TT-201C)	28.4 °C
		D (TT-201D)	28.4 °C



Fast. Affordable. Reliable.

P3/BOO Case Study 8



Fast. Affordable. Reliable.

- 💧 **Desal**, be it brackish or seawater (or wastewater re-use) **is a specialized industrial process**
- 💧 All desal plants require **a dedicated, trained, & fully supported O&M team, with a realistic O&M budget**, to achieve high levels of production/up-time
- 💧 **Clients** (government, local government, industrial) **can reduce the project risk** re: the design, construction, & long-term O&M **by using the same company to execute all 3 phases** (design, construction, O&M) of the project

- 💧 **P3/BOO** is an excellent contractual vehicle to enable any public sector entity to **quickly execute** any water sector project whilst **minimizing long-term risk**
- 💧 **Desal** projects are particularly well suited to be executed under a P3/BOO form of contract due to their **specialized nature**

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