



Waterloo Light Rail Transit Project

A Discussion on Questions And Answers Regarding the DBFOM Delivery Option

**Presentation to Planning and Works Committee
Region of Waterloo**

January 31, 2011

Background

- This presentation focuses on the DBFOM option, as recommended in Report E-12-011. A summary of incremental benefits of DBFOM, as compared to the other options considered in this report, is provided below for background.

Option	Incremental Benefits
DBB	N/A (Base Case)
DB	Design and Construction bundled under single contract
DBf	Same as DB + payment withheld to secure satisfactory completion
DBOM	Same as DB + bundled with Operations and Maintenance under single contract to minimize interface issues (finger pointing)
DBFM	Same as DBf + bundled with Maintenance under single contract with construction payment withheld and re-paid over maintenance term to secure satisfactory performance
DBFOM	Same as DBOM with construction payment withheld and re-paid over operating term to secure satisfactory performance

Questions that will be answered in today's presentation

1. Why DBFOM?
2. Why is O included? Pros & cons with O in/out
3. Why a 30-year term?
4. Why bundle M with DB? Why bundle O with M?
5. How do we build in cost escalation?
6. How do we avoid labour disruption like is happening in York Region?
7. How do we negotiate a contract for Stage 2 LRT (Kitchener to Cambridge) without being held to ransom?
8. What options have been used in other North America municipalities?
9. How are integration issues addressed in a DBFOM ?

These questions were developed from a list of issues that typically arise in the application of the DBFOM option

1. Why DBFOM?

- Main advantages:
 - Government (“Public Sector”) retains ownership and control
 - Design, construction and operations “contract bundle” provides a single contractor (“Contractor”) responsible for all elements
 - Based on output specifications which allows the Public Sector to define how the Facility should perform (and not how it should be built)
 - Lifecycle approach (25yrs to 30yrs operating term) incents Contractor to build the Facility with operational performance in mind (e.g. Lifecycle Maintenance)
 - assures constant level of performance
 - Withheld Construction costs (“F”) that are re-paid over the operating term becomes vested “private capital” at risk for poor performance
 - Long term investment horizon provides Contractor incentives to innovate (e.g. reduce costs)
 - Binds Public Sector to same output specifications (e.g. Maintenance)
 - Public and Private interests aligned to benefit from good performance

DBFOM is a form of contractual structure used by Infrastructure Ontario in their Alternative Finance and Procurement program (“AFP”)

2. Why is O included?

- The main reason O&M components are “bundled” together in the majority of transit AFPs /PPP is to avoid interface issues with the Contractor’s fixed price maintenance commitments

PROS

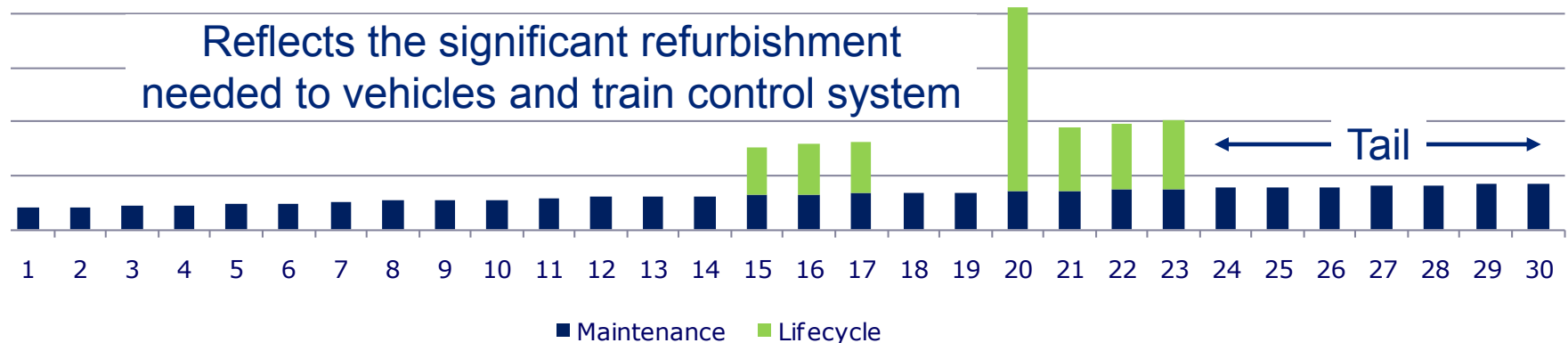
- Prevents finger-pointing and keeps single point of accountability - Contractor cannot claim that mode of operation has impacted maintenance, or vice versa
- Private operator has comparatively more experience/expertise (on operations)
- Avoids complications around commissioning/driver training process

CONS

- Perceived loss of “control”
 - Reality: In most DBFOM projects, Public Sector owns assets and controls policy (route, schedule, and fares)

3. Why a 30-year term?

- A typical cost profile of annual Maintenance and periodic Major Maintenance / Refurbishment (Lifecycle) demonstrates that the most significant financial risk is during the mid point:



- 30 yr term “wraps” around the Lifecycle refurbishment period to ensure that the Facility will perform consistently over longer period
- Contractor prefers a suitable “Tail” after final Lifecycle refurbishment to enable cost-recovery if costs are higher than expected (30 yr term is preferred over 25 yr)
- Traditional Maintenance contracts are typically in the 5yr-10yr range to avoid costs for initial Lifecycle (which are borne by Public Sector)

4. Why bundle M with DB? Why bundle O with M?

- Bundling the M with DB follows a Lifecycle approach (with 25yr-30yr term) that incentivizes Contractor to build the Facility with maintenance costs / performance in mind (e.g. Lifecycle maintenance) to ensure a constant level of performance
- Bundling of O&M:
 - Avoids claims from Contractor that Operation of the Facility has caused its fixed Maintenance costs to increase
 - Provides a single party responsible for all elements
 - Provides incentives to consider Operational characteristics when designing / constructing the Facility
- Higher degree of bundling and longer investment horizon provides Contractor with more opportunity to innovate (e.g. reduce costs)
- Aligns Public and Private interests to performance (e.g. both parties benefit)

5. How do we build in cost escalation?

- Monthly Service Payments are made through a Payment Mechanism defined in the contract:
 - Base Costs for Annual Maintenance and Operations, and periodic Lifecycle are fixed to bid submission
 - The Payment Mechanism enables each to be escalated based on pre-defined benchmarks (e.g. CPI) to account for cost inflation
- Approach represents a “risk sharing” where Contractor assumes Base Costs risk and Public Sector assumes inflation risk
 - Transferring inflation risk would cause Contractor to include significant premium for economic factors outside of its control (e.g. it controls the Base Costs)
- Some items such as insurance and energy prices are flow-through
 - Insurance costs are market based
 - Contractor is required to assume energy consumption risk (gas + electricity)
- Can also require Contractor to price in future service level increases based on anticipated ridership growth

6. How do we avoid labour disruption like is happening in York Region?

- Labour disruptions are typically based on wages and benefits which are budgetary issues:
 - If Public Sector agrees to assume wage/benefit risk and is willing to meet bargaining demands, disruptions can be minimized
 - If Public Sector prefers to transfer wage/benefit risk then the Private Sector will negotiate based on its fixed cost bid (e.g. its budget)
- Requirement to re-pay long term private finance (“F”) can provide an added incentive to avoid / limit labor disputes

7. How do we negotiate a contract for Stage 2 LRT (Kitchener to Cambridge) without being held to ransom?

- Options open to the Region :
 - Negotiate a scope change with Stage 1 Contractor following the Variation Procedure in the Infrastructure Ontario template agreement
 - Enables independent verification of costs
 - Request Stage 2 bids in Stage 1 RFP:
 - Any bid will have an expiry period (5 to 7 yrs)
 - Tender Stage 2 LRT as a separate contract package
 - Vehicle and Train Control systems can be made to comply with Stage 1
 - Will require an additional Maintenance Facility for Stage 2
- UK approach – Long-term DBFM + short-term O contract for Phase 1; tender new DBFM contract for Phase 2 and new system-wide O contract for Phase 1 and 2

(Consistent with Recommendation)

8. What options have been used in other jurisdictions?

- Hudson Bergen (New Jersey)
 - DBOM
- Canada Line (Vancouver)
 - DBFOM
- Denver Eagle
 - DBFOM
- Evergreen Line (Vancouver)
 - DB
- Air Rail Link (Toronto)
 - DBf
- Ottawa Light Rail
 - DBFM
- Australia Gold Coast
 - DBFOM (15 yrs)
- Metro North (Dublin – project on hold due to funding issues)
 - DBFOM
- Docklands Light Rail (UK)
 - DBFOM
- Nottingham Light Rail, Phase 1 and Phase 2 (UK)
 - DBFOM
- Manchester Metrolink (UK)
 - DBFOM
- Kuala Lumpur Light Rail System (Malaysia)
 - BOOT (60 yrs)

9. How are integration issues addressed in a DBFOM?

- How is the public/private interface managed?
 - Public Sector sets the performance specification (headways) to meet expected ridership (Contractor to determine how to design Facility to meet the specifications)
 - Maximum platform lengths are set by Public Sector
 - A key performance metric is Vehicle KMs, which is bid based on the performance specification (allows flexibility in scheduling and payment)
 - Payment Mechanism defines thresholds above which the Public Sector would have to compensate the Contractor if LRT service frequency is increased

9. How are integration issues addressed in a DBFOM? Cont'd

- How to negotiate changes in schedules, stop locations or fare media?
 - For schedules (headways) see Slide 10
 - Additional stops or changes to fare media (new technology) would trigger a Variation Procedure
- How to manage customer service issues?
 - Region will be the customer's source of contact to ensure a seamless transit system (Bus + LRT systems)
 - Payment Mechanism include KPIs for service quality (e.g. cleanliness of train) with deductions for poor performance

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