Bulletin 5: Fixed Unit Price Model

Why have we chosen this model?

Over the past 5 years this model has been adopted for different work streams at BC Hydro. It has provided cost savings for BC Hydro and operational cost predictability for contractors. The fixed unit price model creates a more balanced financial risk profile for both BC Hydro and our contractors.

Contractor

- Fixed unit pricing offered by BC Hydro
- Contractors anticipate operational costs and overhead when bidding
- Changes represent added work scope (not operational needs)
- Moderate change order volumes are expected
- All work is competitively bid

BC Hydro

- Fixed unit pricing creates cost transparency
- Moderate change order volumes
- Change orders represent added scope (not operational needs)
- More of the total work is competitively bid through the RFP
- All work is competitively bid

How does a Fixed Unit Model support balanced financial risk?

Contractors consider their overhead and operational costs upfront when bidding on the unit → This approach identifies the full cost of completing a unit

BC Hydro pays for the required work → We will entertain change orders, we won't pay extra for operational items

The result is improved transparency for both parties. The contractors have the opportunity to identify and incorporate their operational costs and BC Hydro pays for the defined work

What is a Fixed Unit?

- Predefined unit of work that BC Hydro has developed to manage consistent construction
- Assembly of multiple units makes up a civil construction work order
- A fixed unit price includes the crew labour time and equipment costs necessary to complete the work included in the unit scope
- A fixed price is applied to each unit of work on the work order. Each unit price is multiplied by the quantity of the distinct unit. For example,

Work Scope: Install 4 M of Unit CxxDBBE13 → 4 x $300 = $1200

Name	Work scope	Unit code	Price
Trenching and Duct Installation Direct Buried	1 to 3 ducts per trench—All Horizontal Under Bare or Landscaped Earth – backfill w/ native soil & temp patch.	CxxDBBE13	$300/M[1]

[1] Pricing included in the example is for illustrative purposes only

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How will this model address the inherent variability in the work?

Our proposed RFP unit list will include fixed units and additional cost management tools to address this variability such as,

Variable Units—Units that are used to support work situations without a pre-determined scope such as equipment rates for Trouble/Emergent work and/or standby time. These units also provide a tool to address extenuating circumstances such as mobilization to remote work sites, responsibilities of Prime Contractor and transportation and disposal of contaminated materials

The examples provided are not exhaustive, they represent a portion of the variable unit types however they demonstrate how BC Hydro plans to incorporate flexibility within the unit rate structure

Application of all variable units requires negotiation with the Contract Manager

Below are further explanations of variable units:

Equipment—Variable Equipment units may be applied in the following situations,

- Contractors are asked to do work without a defined scope such as Trouble or Emergent work
- Equipment needs to stay on site, waiting in "standby" mode
- Equipment that is infrequently used or "non typical"[2] for civil construction is required

Type	Scope	Price
Equipment	Sweeper truck and operator–includes water and Non–hazardous disposal	$300/hr[3]

Travel Unit—Unit designed to capture mobilization costs outside the defined boundaries.

- Mobilization of crews and equipment inside the predefined boundary is an operational cost included in the Fixed Unit Price
- Work beyond the predefined boundary generates higher mobilization costs with a lower frequency of work. In these instances BC Hydro is prepared to pay a flat travel unit rate per job that covers the return transport of crews and equipment

Prime Contractor—Civil Contractors are expected to act as the Prime Contractor on a Multi Employee work site when there is a need. However, this role is not expected for every job.

- BC Hydro is incorporating a variable unit when the Civil Contractor is Prime recognizing there are added costs due to the responsibility and coordination necessary to fulfill this role. For example,

Type	Scope	Price
Prime Contractor	Assume Prime Contractor at a multiple–employer workplace as agreed to in advance in writing with Hydro's Representative	$500/day*

*Pricing included in the example is for illustrative purposes only

Transportation & disposal consideration—The nature of civil construction work requires contractors to supply fill and remove excavated materials. Providing fill, and removing clean excavated materials are included in the work unit scope. However, removing contaminated materials (eg: transformer oil spill) or dangerous goods (eg: asbestos) generates higher operational costs for contractors.

- BC Hydro is prepared to support this burden with the inclusion of a variable unit designed to cover transportation and disposal of this sensitive material.

[2] "Non typical" refers to situations that are infrequent or occur less than ~80% of the time

[3] Pricing included in the example is for illustrative purposes only

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Additional cost management tool:

Fuel Adjustment—The BC Hydro Civil Contract format will include a mechanism to support cost recovery on fluctuating fuel prices. Contractors do not need to "front load" their prices to address fuel cost fluctuations.

- The fuel adjustment model is proposed to be an annual adjustment derived from a pre-defined calculation which is tethered to a standard and recognized index
- Once a year a calculation is processed to confirm if fuel costs have remained static, increased or decreased
- When fuel prices increase by a predefined %, BC Hydro pays contractors the contract assigned amount. When fuel prices decrease, contractors pay BC Hydro the contract assigned amount

How does this impact you?

Spend time understanding the fixed and variable unit scopes. When submitting bid prices take a comprehensive approach,

- Read all RFP notes to understand the full scope of the unit and the applicable standards
- Understand the variable unit application
- Consider the additional cost management tools (eg: fuel adjustor)

Where can you find more information?

The monthly bulletins and related FAQs can be found on the **Civil Underground Construction Page**

For questions about the Contract Management process, please email: **cucinfo@bchydro.com**

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