


Awarding TCCs for Transmission Expansions: The MSWG Proposal (Condensed)

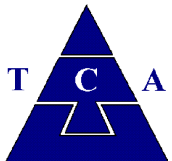


Prepared by

**Scott Englander and Assef Zobian
Tabors Caramanis & Associates**

for

**NY Business Issues Committee
June 22, 2000**



Summary



- ▶ **What:** A way to award TCCs for transmission expansions
- ▶ **Why:** To provide incentives for investments in transmission
- ▶ **How:** Flexible approach offering the choice of long-term TCCs or periodic options

Objectives of the Proposal



- ▶ Provide incentives for market participants to invest in transmission where it is economic, yet avoid free riders etc.
- ▶ Provide flexible award structure that will appeal to developers with wide range of risk preferences that depend on the type and location of the project, and the type of financing sought
- ▶ Handle multiple expansions:
 - ▶ Benefits must be attributed to projects in an objective and uncontestable fashion
 - ▶ Approach used must be feasible in practice as expansions become layered atop one another

A Flexible, Yet Simple Approach



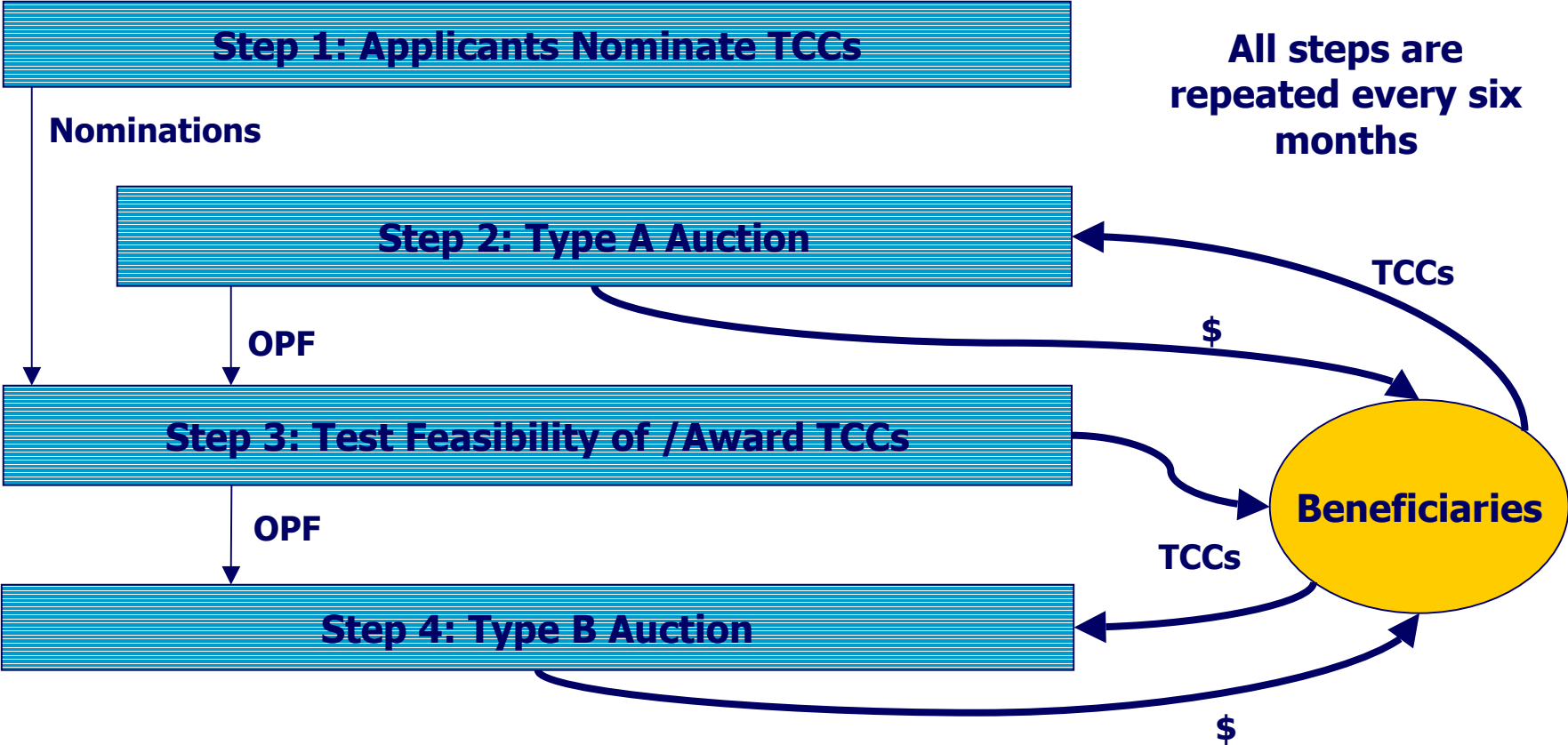
- ▶ For now: “long-term” = 20 years
- ▶ Two choices: Beneficiary can either
 - ▶ nominate one-time award of set of long-term TCCs it wants
 - ▶ take (tradable) right to nominate, every 6 months for 20 years, a set of TCCs it wishes to retain or sell for 6-month period
- ▶ Long-term TCC reduces investor’s quantity risk, but requires that investor manage risk of congestion reversing direction
- ▶ Periodic option enables investors to maximize value of investment over lifetime as market and actual use of physical asset changes

Providing Optionality



- ▶ Why?
 - ▶ Avoid award to other market participants of long-term TCCs made feasible by rights to periodic short-term TCCs
- ▶ How? Separate transmission capability and associated rights in TCC auctions/models
 - ▶ “Type A” auction/OPF (all durations): existing capability and new capability supporting long-term TCCs, excludes new capability supporting 6-month TCCs
 - ▶ “Type B” auction/OPF (6 months only): all capability, includes new capability supporting 6-month TCCs

Award Process Overview



Auction and Award Process



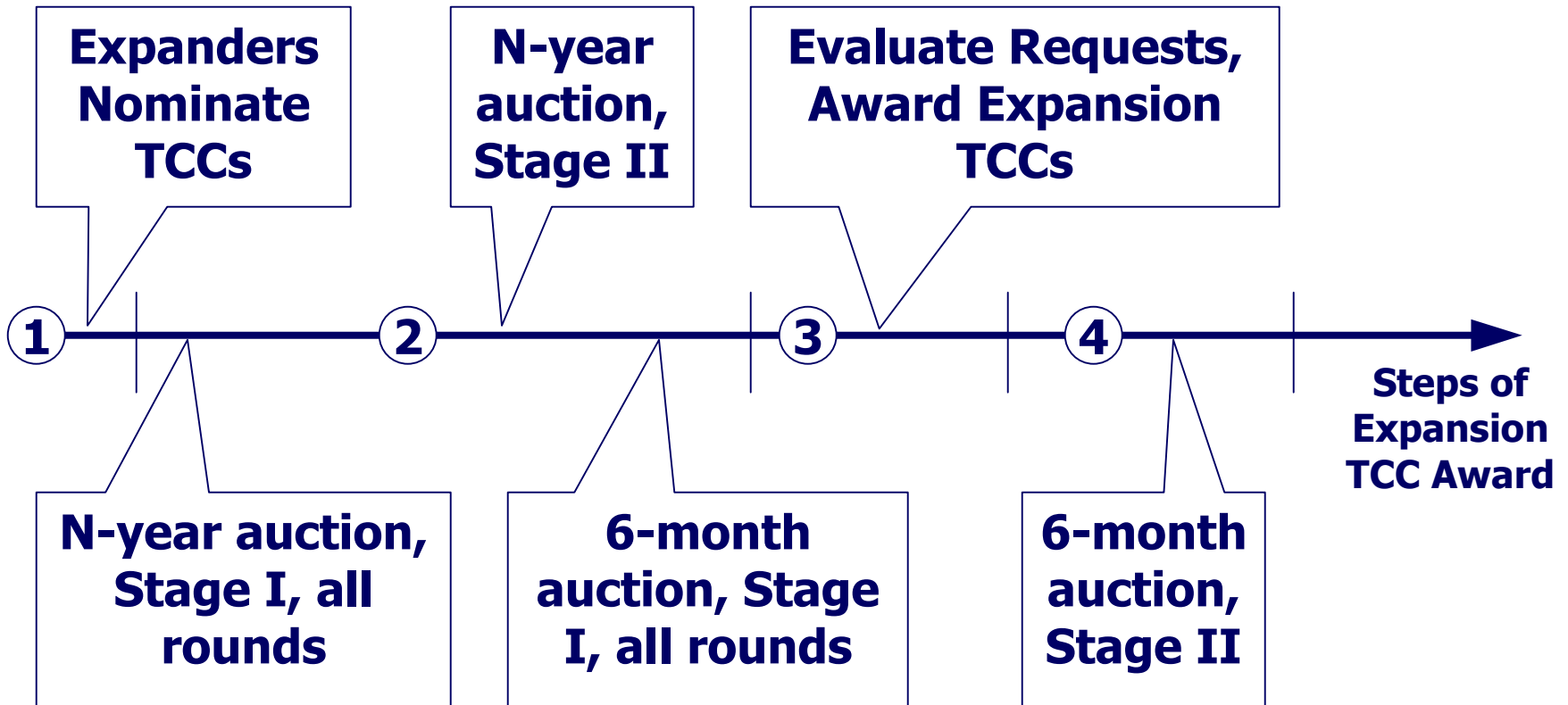
- ▶ **Step 1: Applicants Nominate TCCs**
 - ▶ Applicants whose expansions will be in service by deadline* request long-term TCCs or 6-month TCCs
- ▶ **Step 2: Type A Auction**
 - ▶ Objectives: Develop baseline OPF, provide opportunity for previous recipients of long-term TCCs to sell them
 - ▶ Result: New set of outstanding TCCs/rights included in baseline OPF for Step 3

Auction and Award Process (cont.)

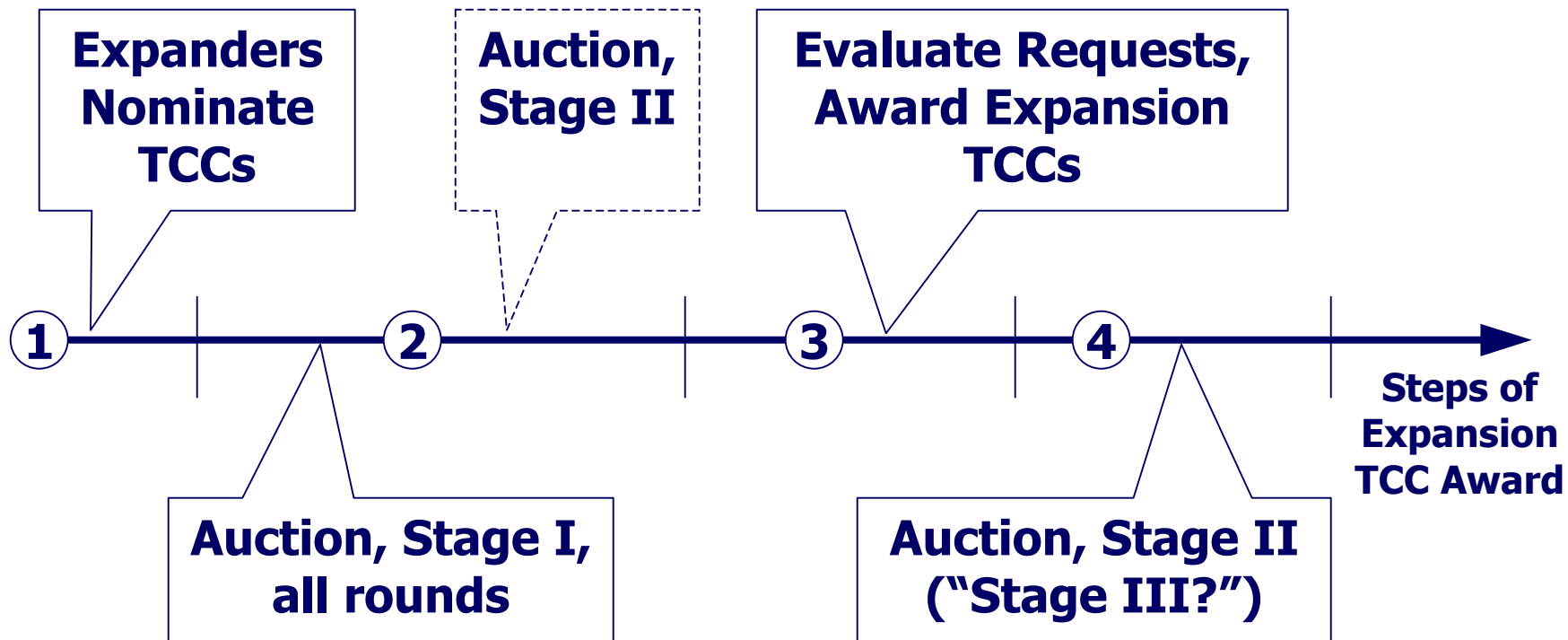


- ▶ **Step 3: Test Feasibility of Requests, Award TCCs**
 - ▶ Objective: Award TCCs made feasible by applicant's expansion but not by existing system or prior expansions
 - ▶ Results: TCCs have been awarded for short-term and new long-term requests; baseline OPF for Step 4 auction developed
- ▶ **Step 4: Hold Type B Auction**
 - ▶ Objective: Provide opportunity for new recipients of TCCs to sell them for next 6 month period

Auction/Award Process Timeline: Initial Auction Framework



Auction/Award Process Timeline: End State Auction Framework



Capacity “Left on the Table”



- ▶ Step 3 ensures that capacity “left on the table” either in an auction or by an expander will be available to support the auctions, rather than given to subsequent expanders
- ▶ Auction revenue from TCC sales supported by such capacity will be allocated using the current (MW-mile) methodology, offsetting TSCs

Example

- ▶ Two expansions in service by deadline for fall
 - ▶ Expansion X in service first: 50 MW, Bus 320 to bus 214
 - ▶ Expansion Y in service second: 100 MW, Bus 24 to bus 47
- ▶ Step 1 Nominations

Who	MW	Period	POI	POW	Wgt.
X	60	20 yrs.	320	214	-
Y	114	6 mo.	H	I	0.5
Y	114	6 mo.	I	J	0.5

Example (cont.)

- ▶ Step 2 (Initial) auctions occur, results in baseline OPF
- ▶ Step 3 feasibility test, Request X
 - ▶ Step 3a: 3 MW of request feasible with existing capacity; 3 MW existing TCCs added to OPF
 - ▶ Step 3b: Expansion X added to OPFs A and B (still the same); only 50 MW made feasible by expansion and awarded; 3 MW existing TCCs removed from OPFs
- ▶ Step 3 feasibility test, Request Y
 - ▶ Step 3a: 8 MW of both requests feasible with existing capacity using OPF B, 8 TCCs H-I and 8 TCCs I-J added to OPF B
 - ▶ Step 3b: Expansion Y added to OPF B; only 100 MW H-I and 90 MW I-J made feasible by expansion and awarded; 16 existing TCCs removed from OPF B

Example (cont.)

Step 3 award summary

Who	MW	Period	POI	POW
X	50	20 yrs.	320	214
Y	100	6 mo.	H	I
Y	90	6 mo.	I	J

Step 4 auction (using OPF B)

- › X sells 10 TCCs for 6 months, collects \$30,000
- › Y sells 5 H-I TCCs for 6 months, collects \$40,000

Example (cont.)

— 6 Months Later (Spring auction, End State) —

- ▶ Step 1: Y makes same nominations; no new expansions
- ▶ Step 2 auction: OPF A from 6 months ago is long-term baseline (includes Expansion X); X sells all 50 TCCs for 19.5 years, earns \$3 million; new OPF results
- ▶ Step 3 feasibility test, Request Y
 - ▶ New OPFs A and B created using Step 2 results
 - ▶ Step 3a: 1 MW of both requests feasible with existing capacity using OPF B, 1 TCCs H-I and 1 TCCs I-J added to OPF B
 - ▶ Step 3b: Expansion Y added to OPF B; 99 MW H-I and 91 MW I-J made feasible by expansion and awarded; 2 existing TCCs removed from OPF B

Example (cont.)



- ▶ Step 4 auction (using OPF B for first 6 month period, OPF A further out)
 - ▶ Y sells 6 H-I TCCs for 6 months, collects \$30,000

Conclusion



- ▶ This process:
 - ▶ Protects rights of current owners and users of transmission system
 - ▶ Reduces risks for new investors in transmission system to an acceptable level
 - ▶ Allows investors to tailor their benefit to best suit their specific project, project financing, and ability to manage different types of risk
 - ▶ Fosters an efficient market in transmission rights
 - ▶ Can be implemented now in its simplest form, and enhanced later on for even greater flexibility
 - ▶ Lends itself to the End State auction approach (actually simpler to implement in that context)
- ▶ See posted document for detailed description

Potential Future Enhancements



- ▶ Allow “retirement” of TCCs if remaining set still feasible
- ▶ Allow applicant to determine duration of long-term TCCs (e.g., 5 or 10 years), with periodic options for remainder of term
- ▶ Allow applicant to switch from periodic options to long-term TCCs at any point in the term
- ▶ Etc...