Cost Allocation Principles Applicable to Multi-Driver Projects as Planned by PJM

(adopted March 7, 2014 by the Section 205 Working Group of the Consolidated Transmission Owners Agreement Administrative Committee)

The following are illustrative examples for the apportionment and allocation of project costs of proportional and incremental Multi-Driver projects as described in the Principles document that was discussed at the March 25, 2014 RPPTF meeting.

Multi-Driver project costs are (first step) apportioned to drivers (reliability, market efficiency, and/or public policy) and (second step) allocated to transmission zones.
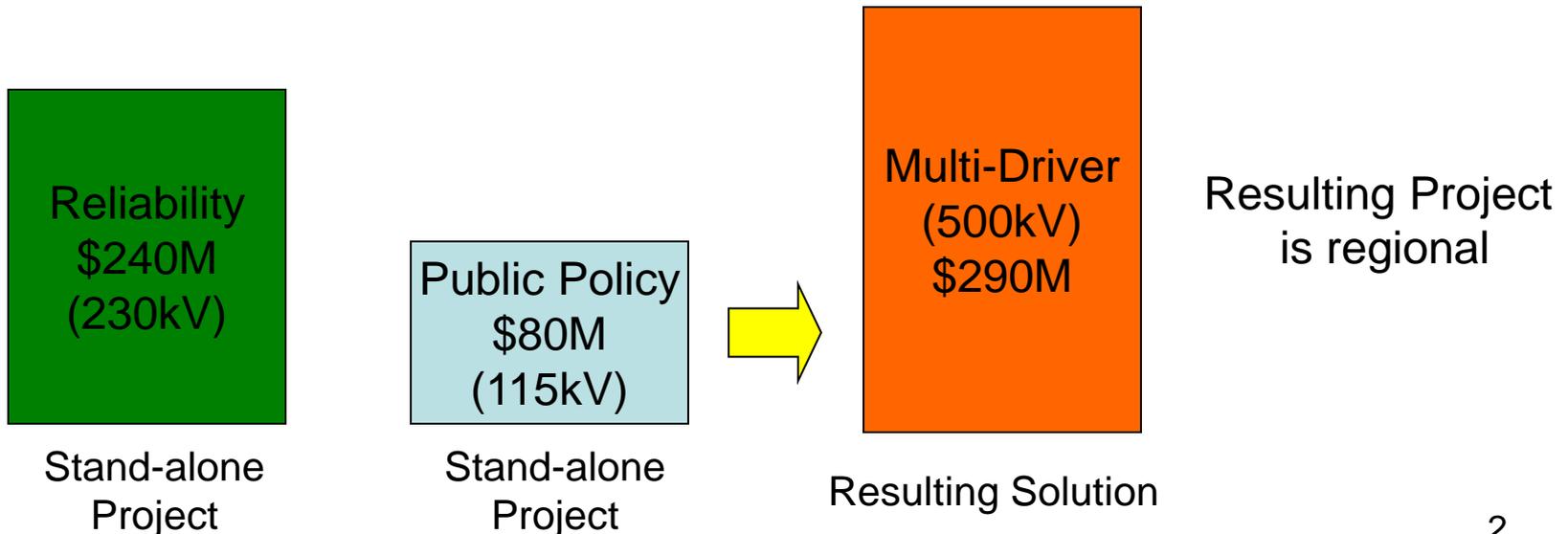
Proportional Multi-Driver projects are those that displace stand-alone reliability, market efficiency, and/or public policy projects.

Incremental Multi-Driver projects are those that take a stand-alone reliability or market efficiency project and incrementally expand the size, scope and cost of that project to address additional market efficiency and/or public policy needs. Leveraging this stand-alone project allows the incremental driver to receive benefit beyond the incremental cost that is added to the stand-alone project.

Proportional Multi-Driver Project Method Example

- Assume PJM has identified a stand-alone 230kV reliability project at a cost of $240M
- Assume there is a stand-alone 115kV Public Policy project at a cost of $80M
- PJM determines that a completely different 500kV Multi-Driver project could accommodate both drivers at a cost of $290M.

Reliability
$240M
(230kV)

Stand-alone
Project

Public Policy
$80M
(115kV)

Stand-alone
Project

Multi-Driver
(500kV)
$290M

Resulting Solution

Resulting Project
is regional

Proportional Multi-Driver Project Method Example

Cost Apportionment of Proportional Multi-Driver Project

Public Policy project: $80M/$320M = 25% of stand-alone project costs

Reliability project: $240M/$320M = 75% of stand-alone project costs

Public Policy driver of Multi-Driver project: $290M x 25% = $ 72.5M

Reliability driver of Multi-Driver project: $290M x 75% = $217.5M

Total : $290M

Cost Allocation of Proportional Multi-Driver Project

Public Policy portion ($72.5M) : Costs allocated according to State
                                                      Agreement approach

Reliability portion ($217.5M):   Costs allocated 50% load ratio share and
                                                      50% solution based DFAX

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Incremental Multi-Driver Projects-Cost Apportionment

For Incremental Multi-Driver projects, costs apportioned to the original stand-alone driver will be credited to reflect benefits provided to the incremental drivers by the original stand-alone project.

1. When an original project is simply accelerated, there shall be no credit applied to original project

2. When an incremental driver changes a project from single circuit to double circuit at the same voltage level, then the original project and incremental driver will be allocated 50% of the estimated cost of the double circuit multi-driver project.

3. For all other incremental multi-driver projects, the original driver credit will be: the ratio of the estimated incremental cost to the total cost multiplied by the estimated cost of the original driver.

4. In no event shall the credit be < $0

Incremental Multi-Driver Project Method Example #1

- Assume there is a stand-alone single circuit 230kV reliability project identified through the PJM planning process at an estimated cost of $150M.
- PJM determines that a Public Policy need can be met by changing the same project to double circuit 230kV. There is no separate stand-alone Public Policy project identified to meet the Public Policy need.
- The resulting incremental Multi-Driver project is estimated at $210M

The cost of this Incremental Multi-Driver project would be apportioned 50% to the Public Policy driver and 50% to the Reliability driver.

Cost Apportionment of Incremental Multi-Driver Project

Public Policy driver of Multi-Driver project: $210M X 50% = $105M

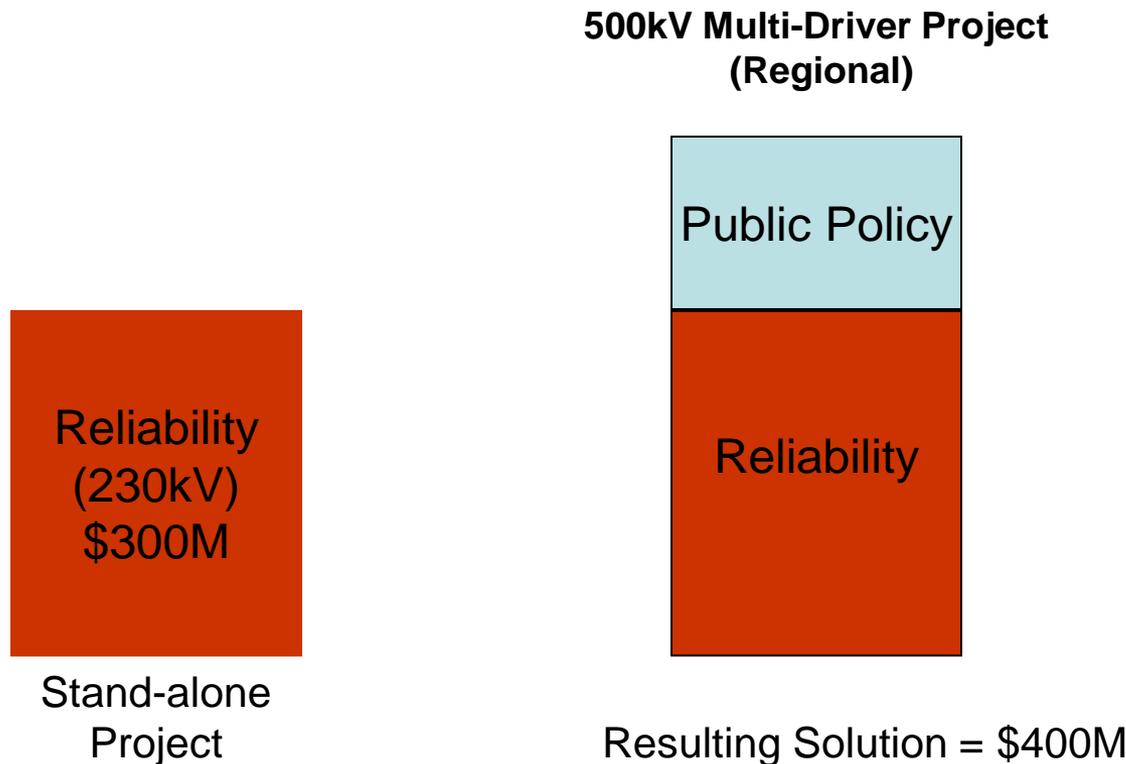Reliability driver of Multi-Driver project: $210M X 50% = $105M

Cost Allocation of Incremental Multi-Driver Project

Public Policy portion ($105M): Costs allocated according to State Agreement approach

Reliability portion ($105M): Costs allocated 100% solution based DFAX

Incremental Multi-Driver Project Method Example #2

- Assume there is a stand-alone single circuit 230kV reliability project identified through the PJM planning process at an estimated cost of $300M.
- PJM determines that a Public Policy need can be met by changing the project to single circuit 500kV. There is no separate stand-alone Public Policy project identified to meet the Public Policy need.
- The resulting incremental Multi-Driver project is estimated at $400M

500kV Multi-Driver Project
(Regional)

Reliability (230kV) $300M

Stand-alone
Project

Public Policy
Reliability

Resulting Solution = $400M

Incremental Multi-Driver Project Method Example #2

Original Driver   =   <u>Incremental Cost</u>   X   Original Driver Cost
       Credit   Multi-Driver Cost

Cost Apportionment of Incremental Multi-Driver Project

Incremental Cost/Multi-Driver Cost = $100M/$400M = 25%

Credit to original (reliability) driver = 25% x $300M = $75M

Public Policy driver of Multi-Driver project: $100M + $75M = $175M

Reliability driver of Multi-Driver project: $300M - $75M = <u>$225M</u>

Total: $400M
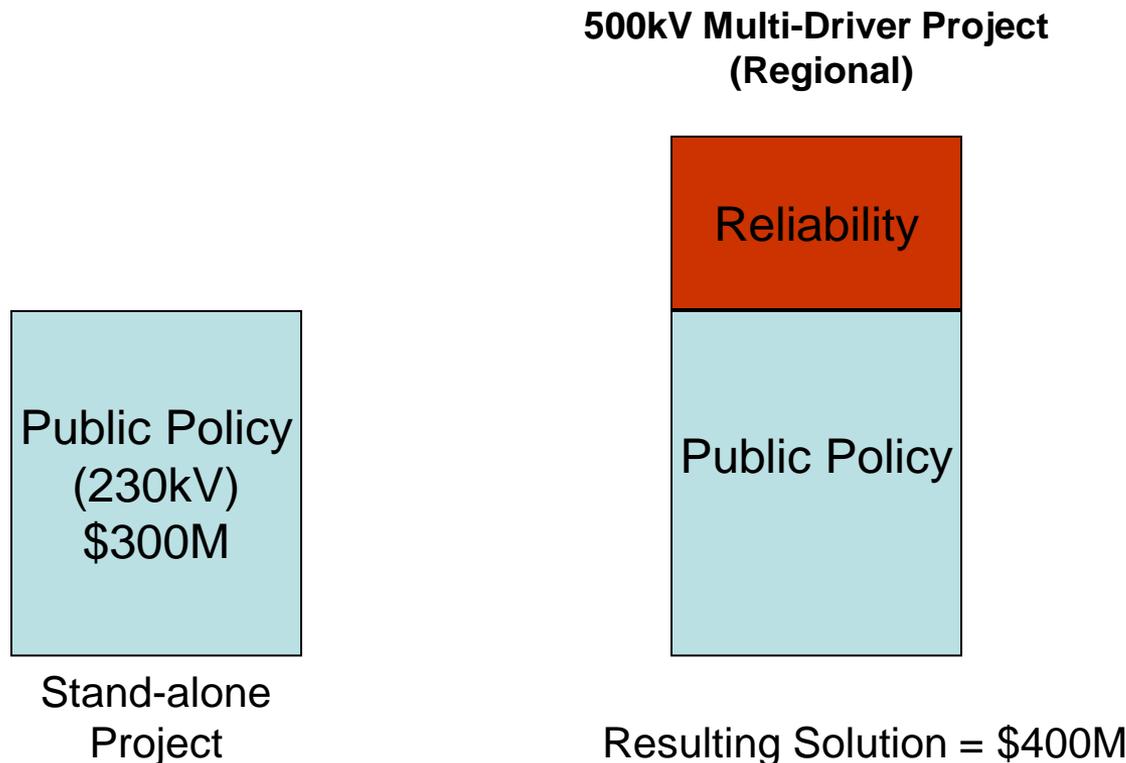
Cost Allocation of Incremental Multi-Driver Project

Public Policy portion ($175M): Costs allocated according to State Agreement
                                       approach

Reliability portion ($225M): Costs allocated 50% load ratio share and 50% solution
                                     based DFAX

Incremental Multi-Driver Project Method Example #3

- Assume there is a stand-alone single circuit 230kV Public Policy project at an estimated cost of $300M.
- PJM determines that a reliability need can be met by changing the project to single circuit 500kV. There is no separate stand-alone reliability project identified to meet the reliability need.
- The resulting incremental Multi-Driver project is estimated at $400M

500kV Multi-Driver Project
(Regional)

Reliability

Public Policy
(230kV)
$300M

Public Policy

Stand-alone
Project

Resulting Solution = $400M

Incremental Multi-Driver Project Method Example #3

Original Driver   =   Incremental Cost   X   Original Driver Cost
        Credit   Multi-Driver Cost

Cost Apportionment of Incremental Multi-Driver Project

Incremental Cost/Multi-Driver Cost = $100M/$400M = 25%

Credit to original (Public Policy) driver = 25% x $300M = $75M

Reliability driver of Multi-Driver project: $100M + $75M = $175M

Public Policy driver of Multi-Driver project: $300M - $75M = $225M

Total: $400M

Cost Allocation of Incremental Multi-Driver Project

Public Policy portion ($225M): Costs allocated according to State Agreement
                                    approach

Reliability portion ($175M): Costs allocated 50% load ratio share and 50% solution
                                    based DFAX