

Namibia Market Structure

MSB: Final Design Amendments

JUNE 2019



INTRODUCTION

Purpose of this Workshop



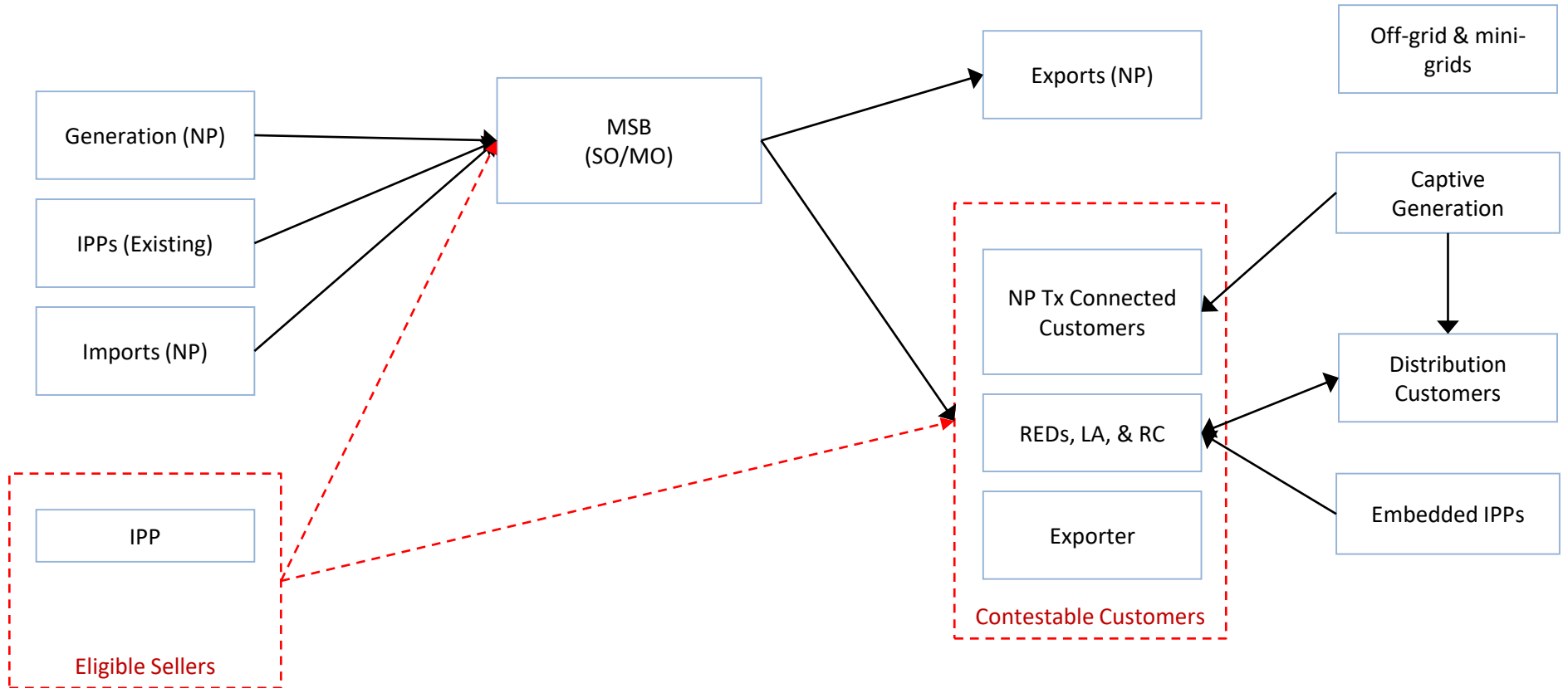
1. To present final changes to the Market Design following feedback from MME
2. To show calculations for the wheeling tariff for Distributors
3. To demonstrate wheeling model and example results



TRADING ARRANGEMENTS

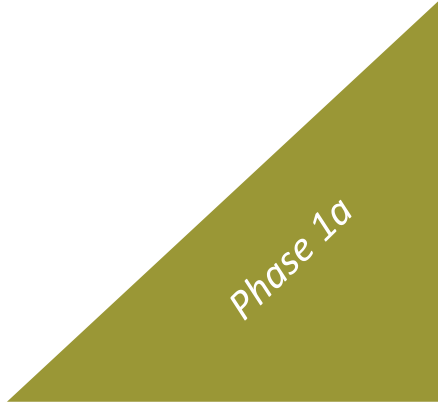
TRADING ARRANGEMENTS

1a



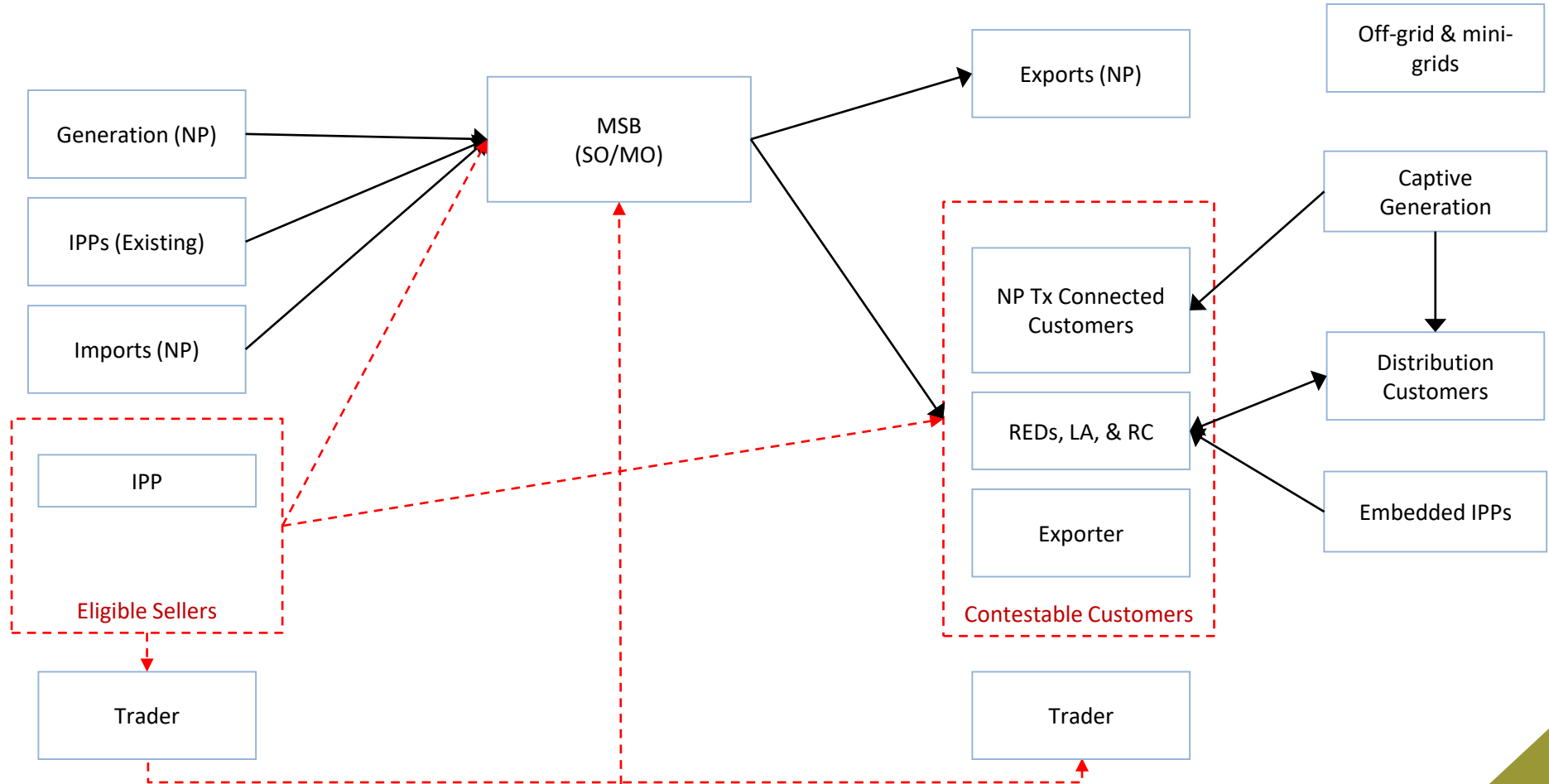
Transactionall Flows from Seller to Buyer

- ▶ Existing arrangement
- -▶ New optional arrangement



TRADING ARRANGEMENTS

1b



Transactional Flows from Seller to Buyer

- ▶ Existing arrangement
- -▶ New optional arrangement



TRADING ARRANGEMENTS

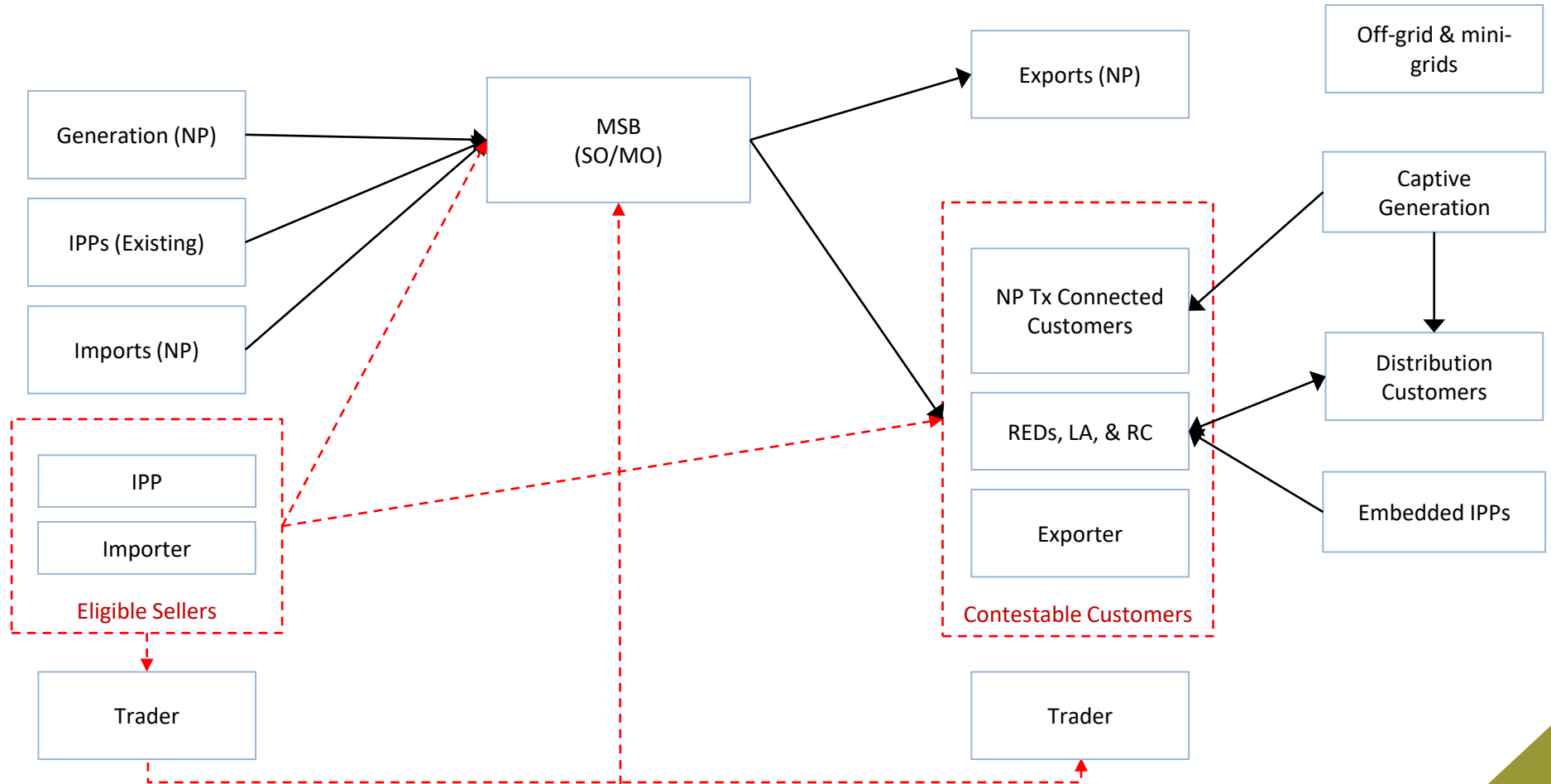
Phase 1 vs. Phase 2



1. Phase 1a: Sep 2019 - June 2021; Tx Customers only
2. Phase 1b: July 2021 – June 2026; Tx + Dx \geq 1MVA
3. Two stage approach to allow Distributors to unbundle sufficiently to enable wheeling for their customers
4. Phase 2: July 2026 – onwards; Tx + Dx (as determined by Regulator); Imports allowed
5. Imports only allowed from 2026 to support government policy of self-sufficiency and to align with unwinding of current import contracts

TRADING ARRANGEMENTS

2



Transactional Flows from Seller to Buyer

- ▶ Existing arrangement
- -▶ New optional arrangement





ELIGIBILITY CRITERIA

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Summary



Phases	1a (1 st Sep 2019 – June 2021)	1b (July 2021 – June 2026)	2 (July 2026)
Contestable Purchases - National Cap	<ul style="list-style-type: none"> 30% of total national purchases 	<ul style="list-style-type: none"> 30% of total national purchases 	<ul style="list-style-type: none"> As determined by Regulator
Contestable Purchases – Customer Supply Point Cap	<ul style="list-style-type: none"> 30% of total customer purchase For Distributors this volume is reduced by 30% of the purchases by $\geq 1\text{MVA}$ connected customers 	<ul style="list-style-type: none"> As determined by Regulator 	<ul style="list-style-type: none"> As determined by Regulator
Contestable Customers	<ul style="list-style-type: none"> Tx Connected 	<ul style="list-style-type: none"> Tx connected Dx connected ($\geq 1\text{MVA}$) Dx connected ($< 1\text{MVA}$) as determined by Regulator 	<ul style="list-style-type: none"> Tx connected Dx connected ($\geq 1\text{MVA}$) Dx connected ($< 1\text{MVA}$) as determined by Regulator
IPPs	<ul style="list-style-type: none"> Licensed Tx or Dx connected Capacity ltd by sales to Contestable Customers 	<ul style="list-style-type: none"> Licensed Tx or Dx connected Capacity ltd by sales to Contestable Customers 	<ul style="list-style-type: none"> Licensed Tx or Dx connected Capacity ltd by sales to Contestable Customers
Exporters	<ul style="list-style-type: none"> Licensed No size limit 	<ul style="list-style-type: none"> Licensed No size limit 	<ul style="list-style-type: none"> Licensed No size limit
Traders	<ul style="list-style-type: none"> On application and approval by Regulator; Licensed No trading volume limit 	<ul style="list-style-type: none"> Licensed No trading volume limit 	<ul style="list-style-type: none"> Licensed No trading volume limit
Importers	<ul style="list-style-type: none"> Not allowed 	<ul style="list-style-type: none"> Not allowed 	<ul style="list-style-type: none"> Licensed Capacity ltd by sales to Contestable Customers



REGULATION OF MARKET ENTRY

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Customers



Customers can register for the MSB, provided that:

- They meet the Contestable Qualifying Criteria at a Supply Point, defined by the Regulator for each Market Phase.
- They can identify the specific Eligible Seller with which they will transact.
- They can identify the specific generating unit that will supply them.
- The volumes specified in the transaction are within their allocated Contestable Purchase limits.
- They pay their MSB Participation Fee.

It should be noted that Contestable Customers can:

- De-register from participation in the MSB market at any time.
- Apply to the ECB to amend their registration for the purposes of identifying an alternative Eligible Seller.

REGULATION OF MARKET ENTRY

Participation Fee



An “MSB Participation Fee” must be paid by Contestable Customers in order to register and participate in the MSB market. The Participation Fee is effectively a “license fee”, charged to Contestable Customers in order to recover the Regulator’s costs associated with registration and regulation of Contestable Customers in the MSB.

- The MSB Participation Fee will have the following characteristics:
- The Fee will be calculated on the Contestable percentage (maximum 30% in Phase 1a and 1b) of a Contestable Supply Point Capacity.
- Each Contestable Supply Point will be calculated individually.
- The fee value will be determined by the Regulator
- Annual Fees are not refundable on de-registration from the MSB.



TARIFF UNBUNDLING

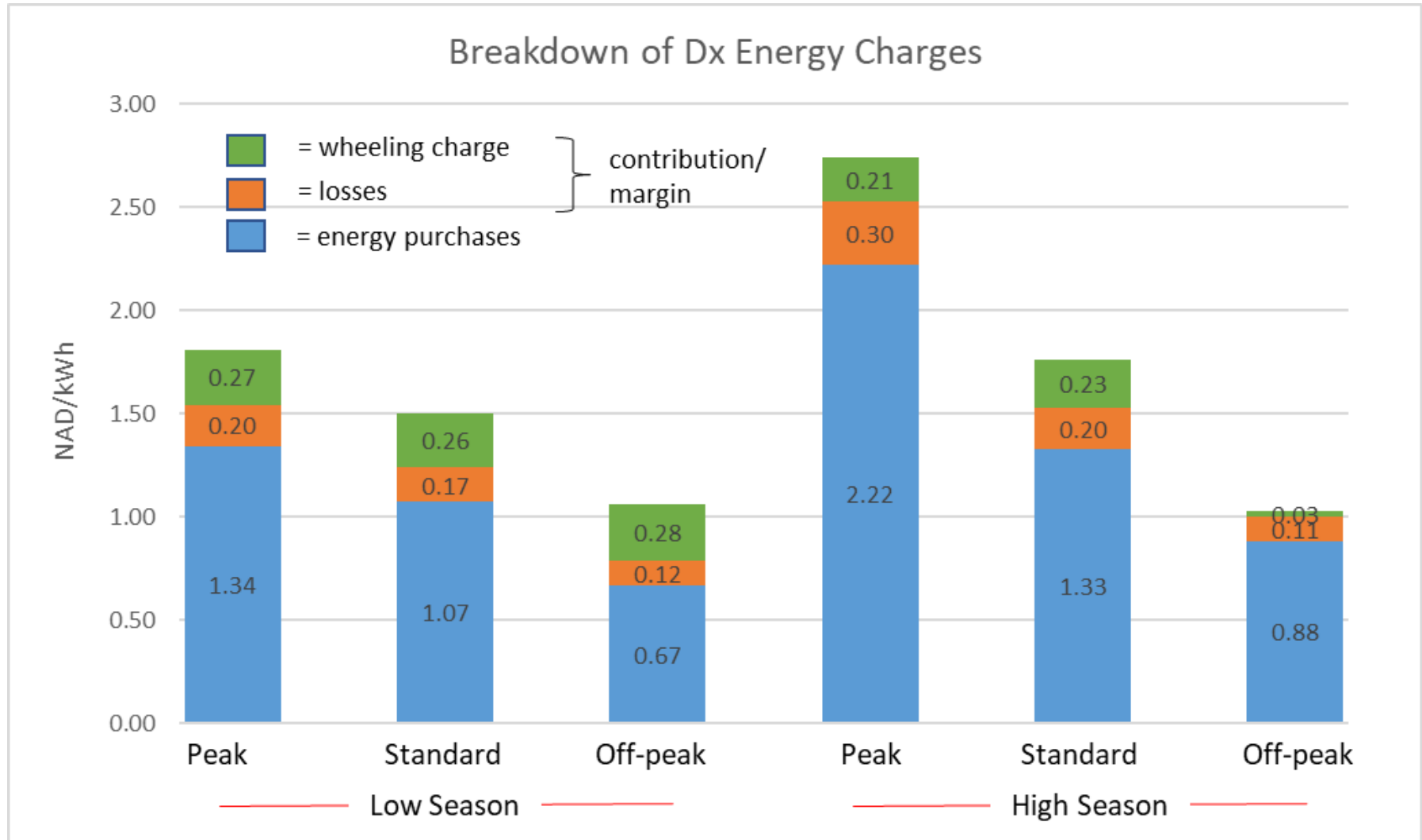
TARIFFS

Unbundled Services



Service	Customers	Generators
Energy (Utility)	✓	-
Less Wheeled Energy Rebate	(✓)	-
Wheeled Energy Addback	(✓)	-
IPP Purchases	(✓)	
Balancing	-	✓
Tx/ Dx Use of System	✓	-
Tx/ Dx losses	✓	(✓)
Network Capacity Reserve	-	(✓)
Distributor Wheeling Charge	(✓)*	-
Reliability	✓*	-
Net Billing (Banking/ Storage)	(✓)	(✓)
Customer service	✓	✓
Levies	✓*	-
VAT	✓	✓

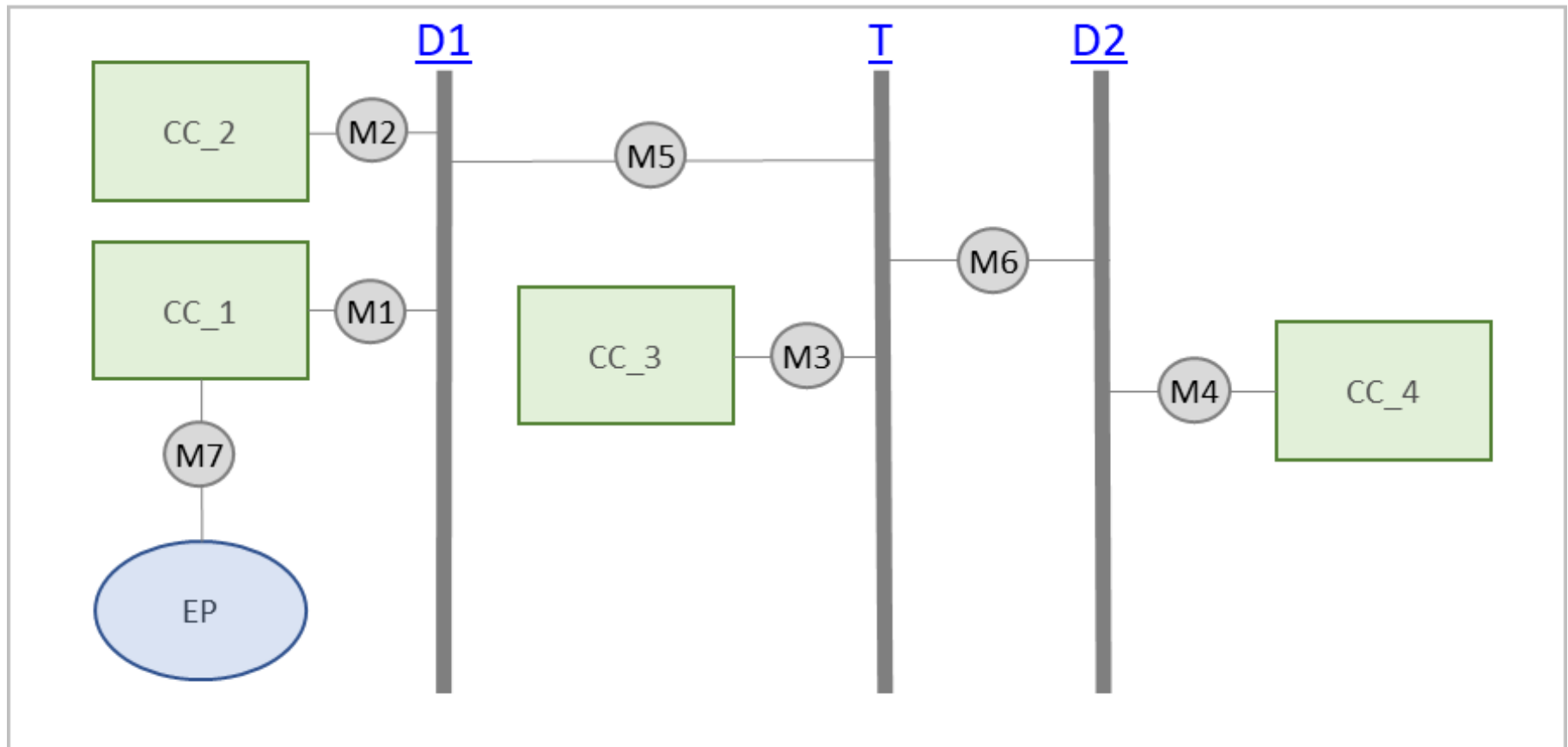
Calculating the Distributor's Wheeling Charge





WHEELING

Simulated Wheeling Transaction in Model

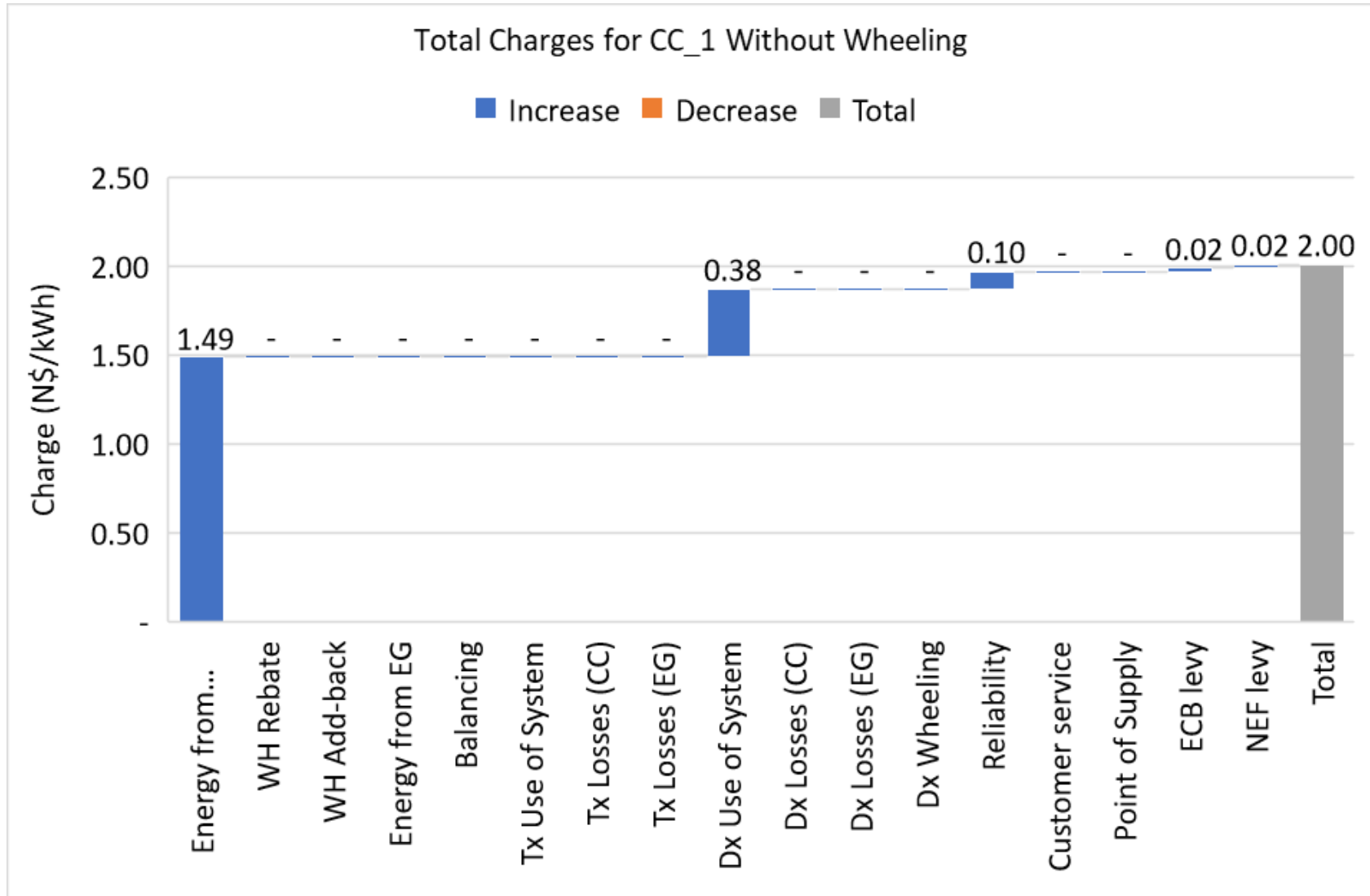


WHEELING
Key Assumptions

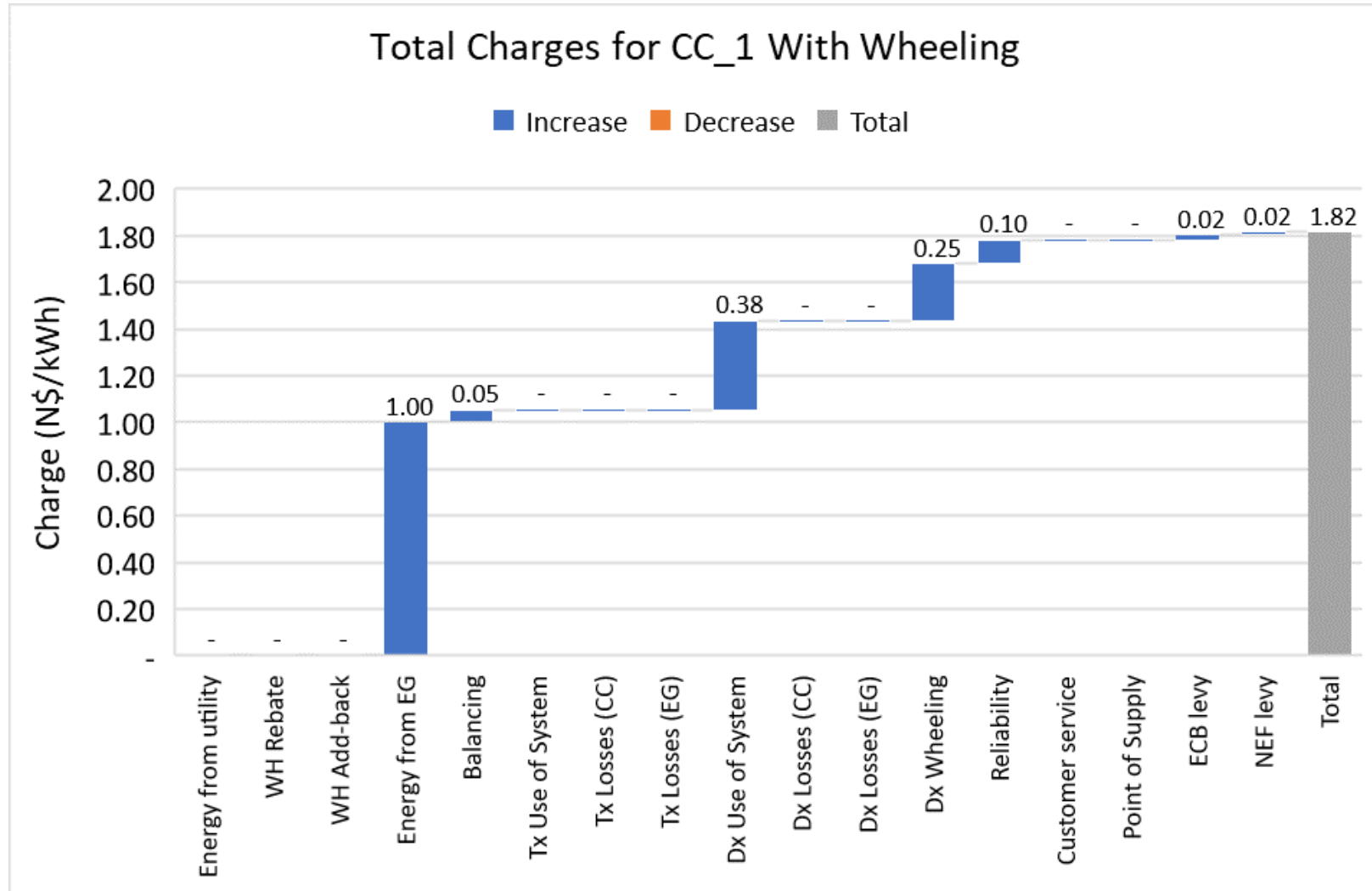


Item	Assumption
Eligible Generator Selling Price	NAD1.00/kWh
Imbalanced Energy	5% of Generator's production
Peak Coincidence Factor (Dx to Customer)	0
Peak Coincidence Factor (Tx to Dx)	0
Tx Losses caused by Generator	0%
Dx Losses caused by Generator	0%
Technical Losses (Tx Customers)	10%
Technical Losses (Dx Customers)	10%
Customer purchases from Eligible Generator	100%

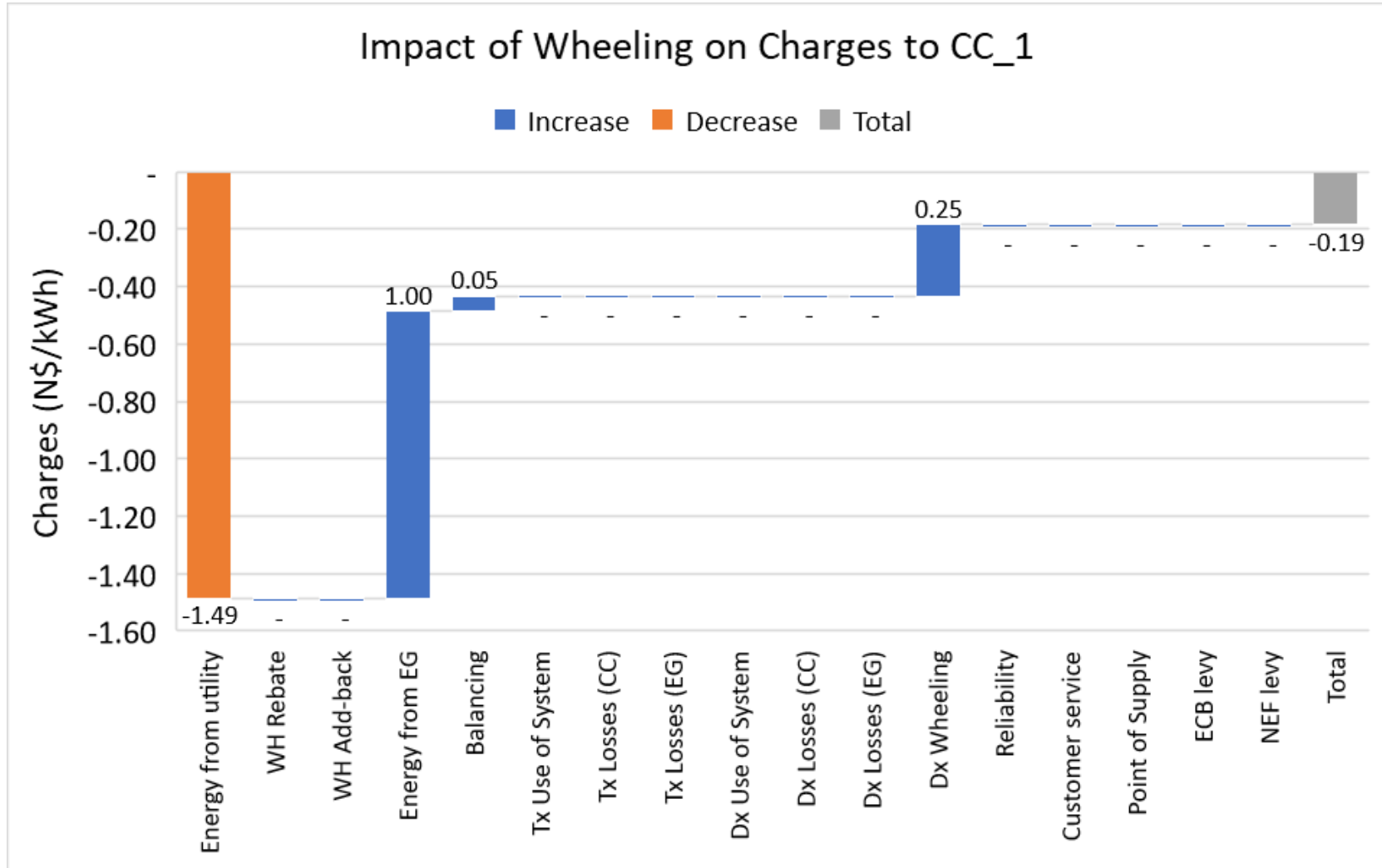
Scenario 1 – Results (No Wheeling)



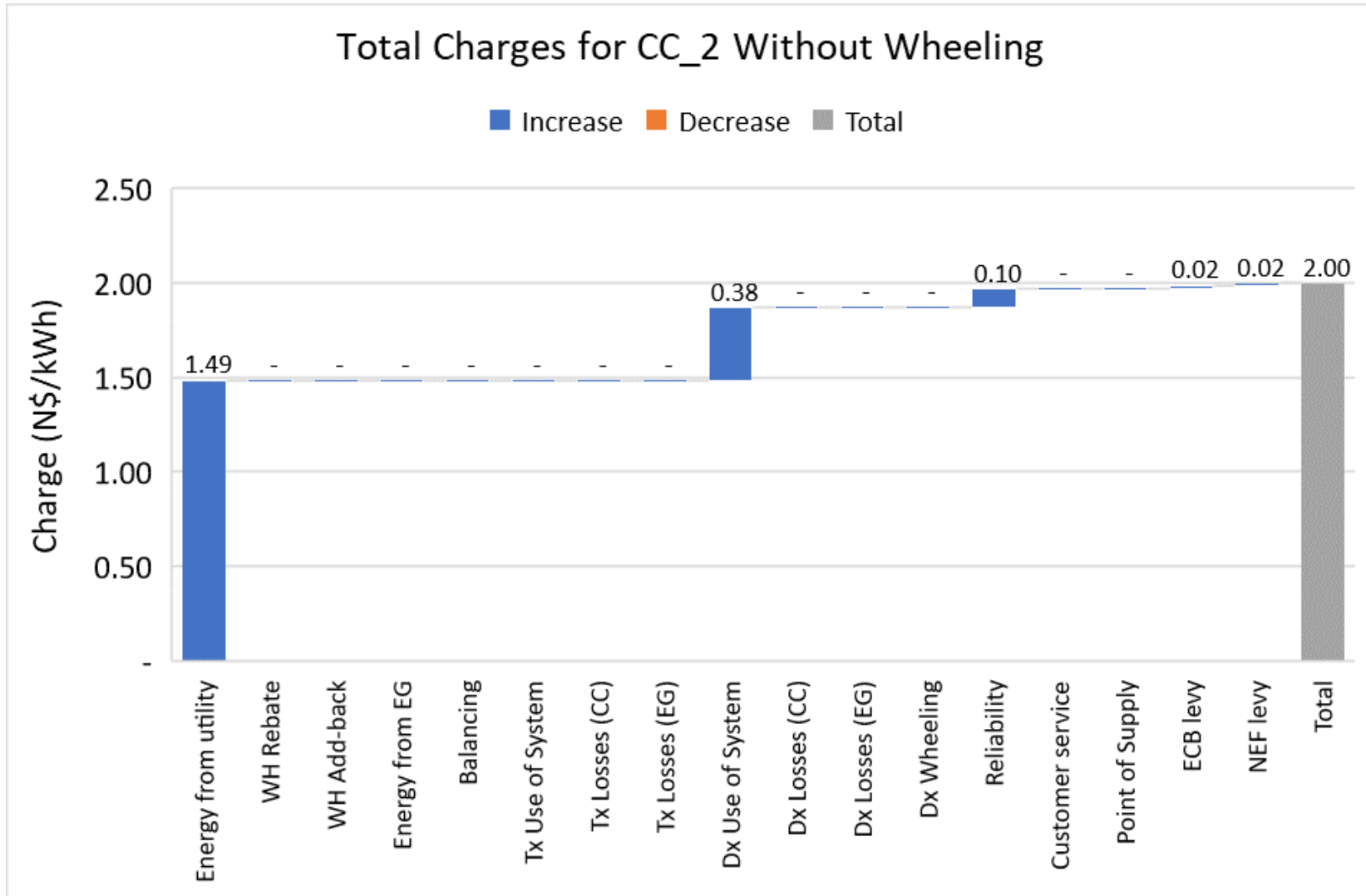
Scenario 1 – Results (Wheeling)



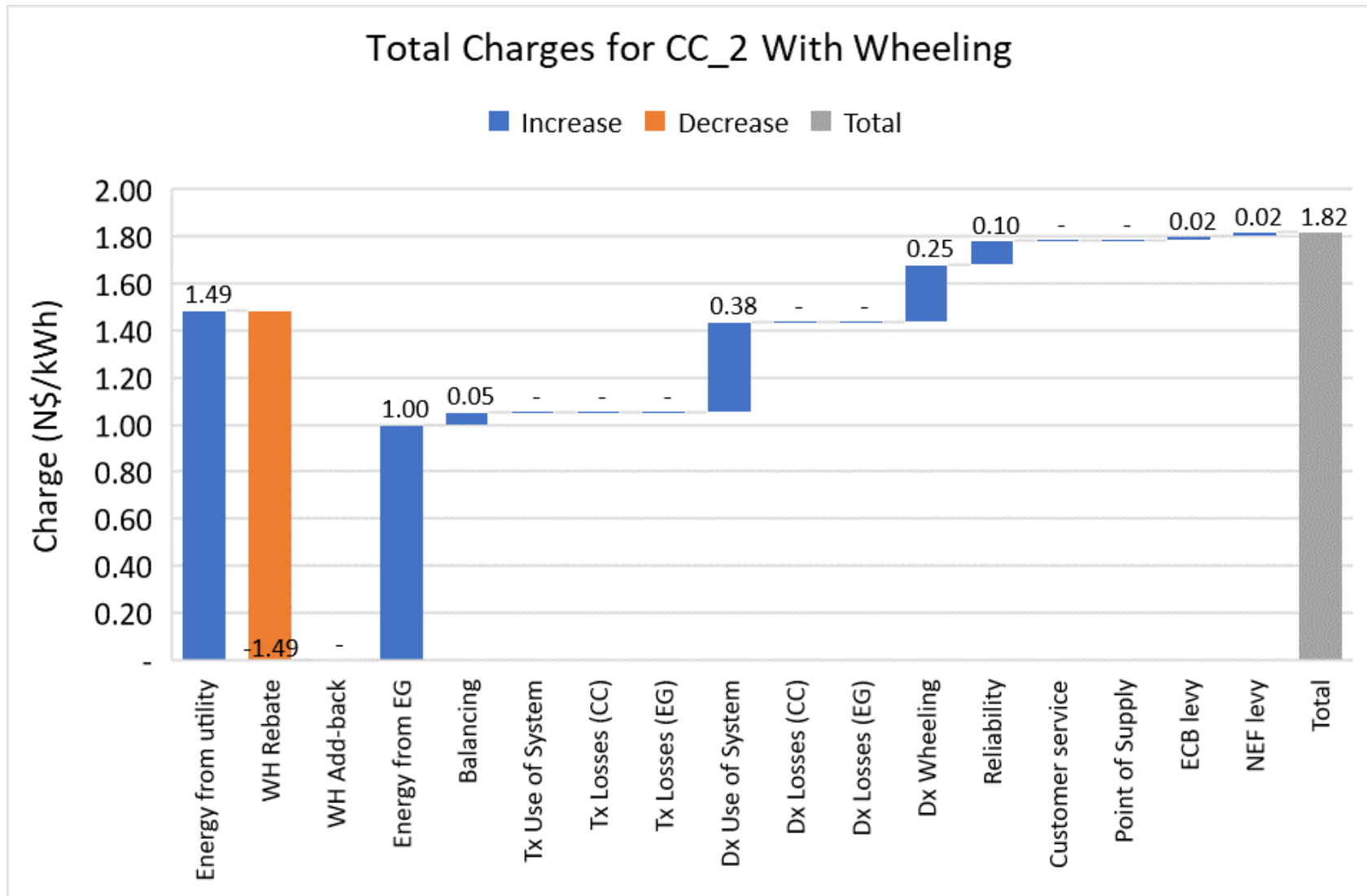
Scenario 1 – Results (Wheeling)



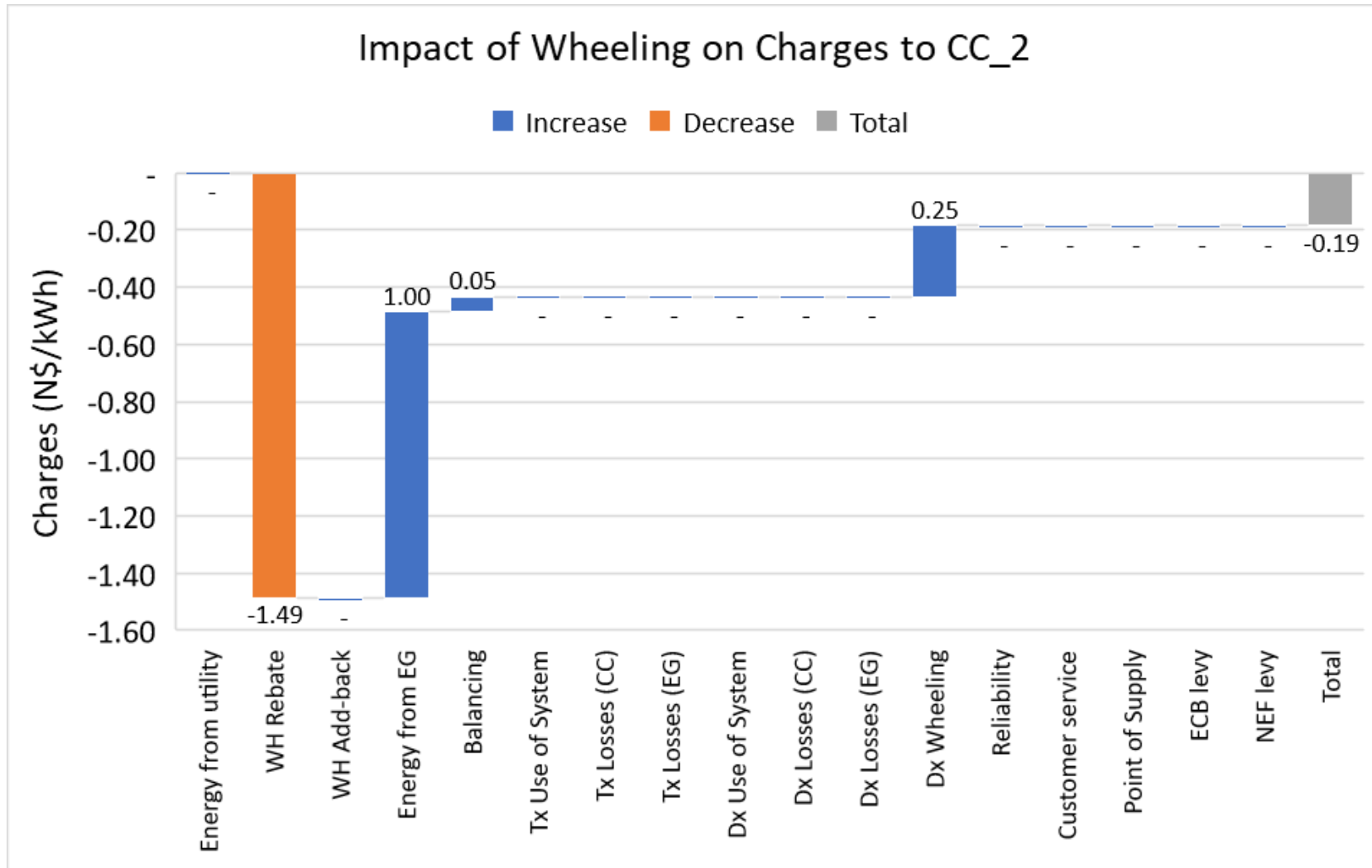
Scenario 2 – Results (No Wheeling)



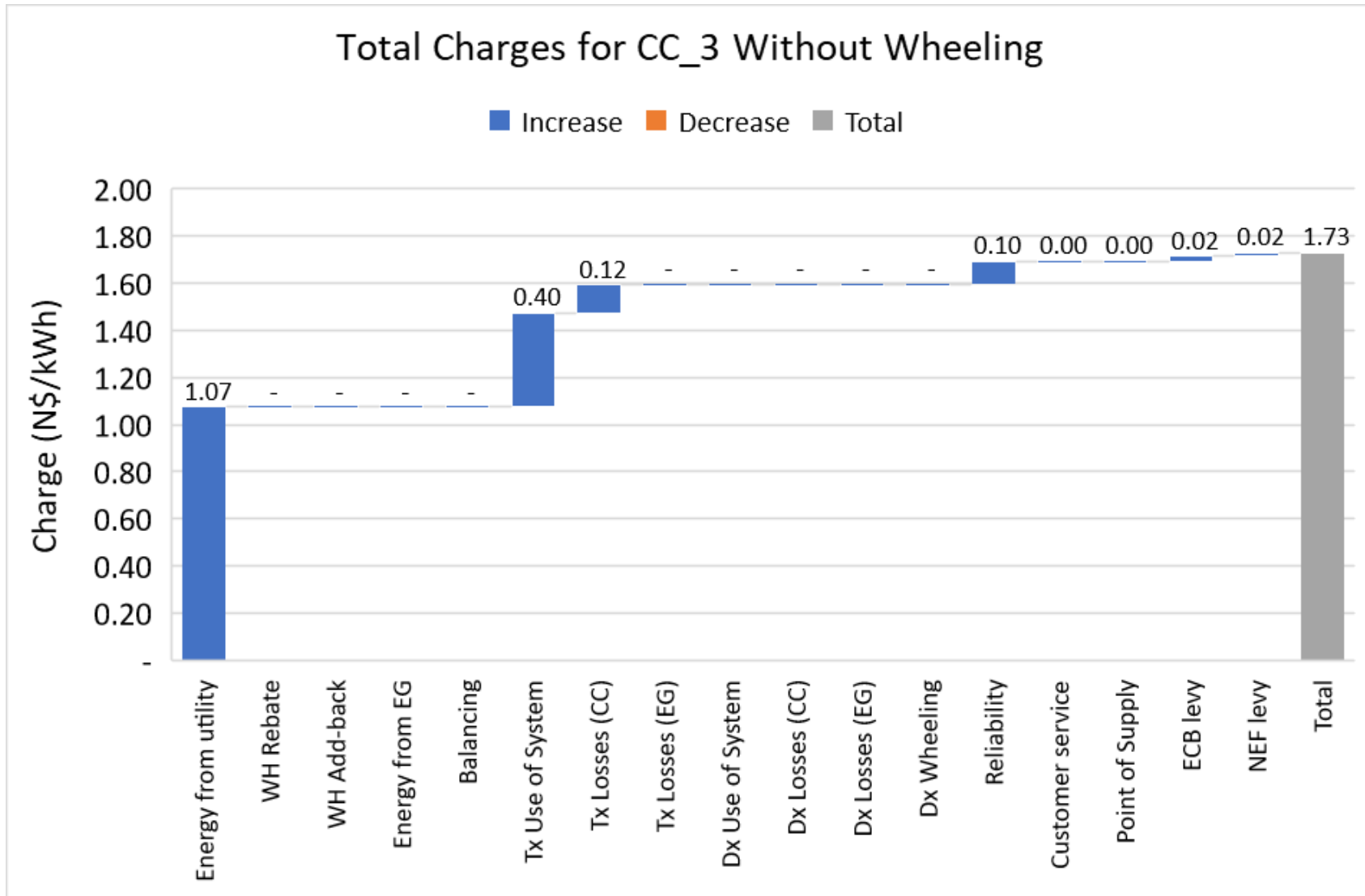
Scenario 2 – Results (Wheeling)



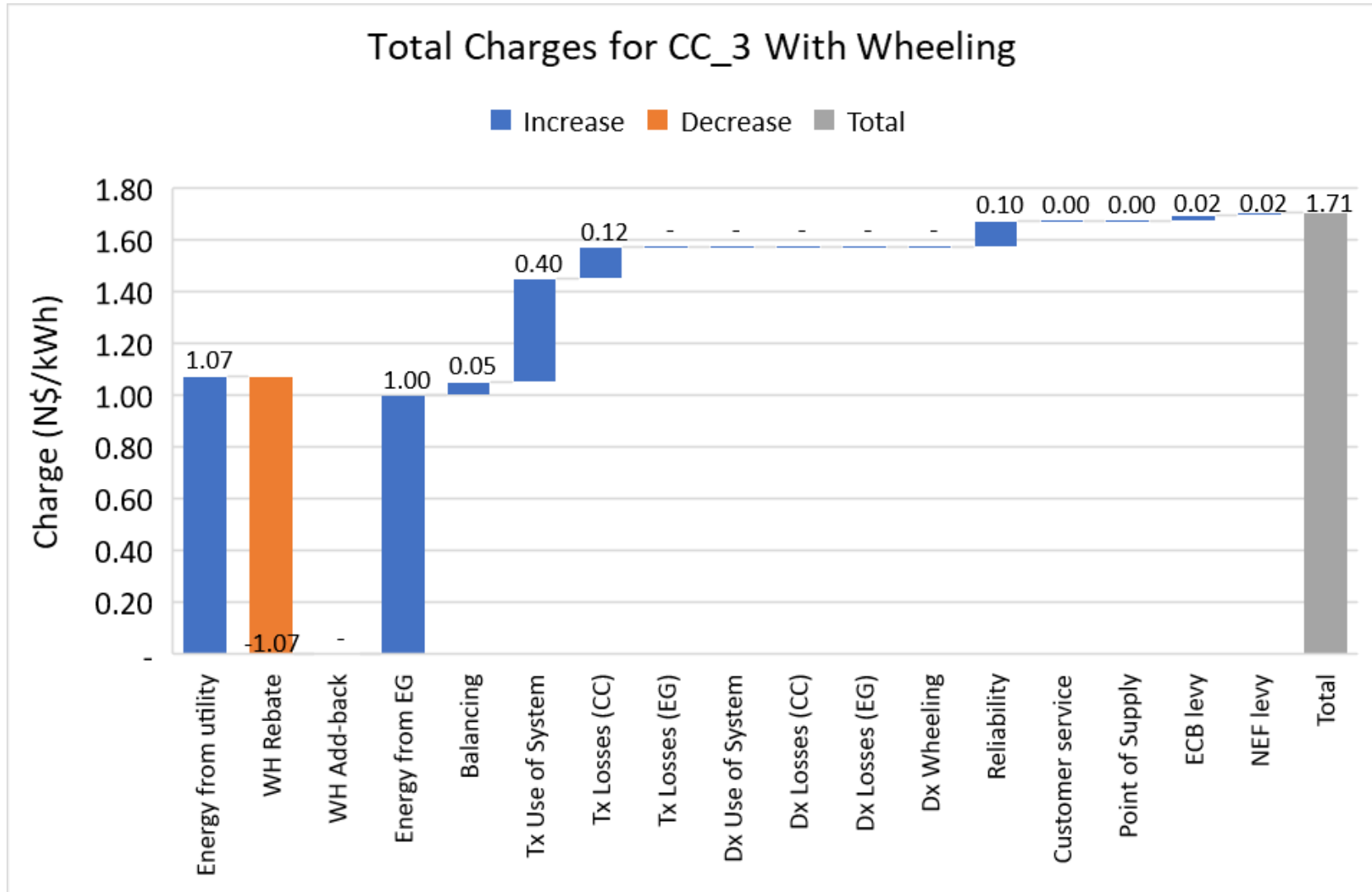
Scenario 2 – Results (Wheeling)



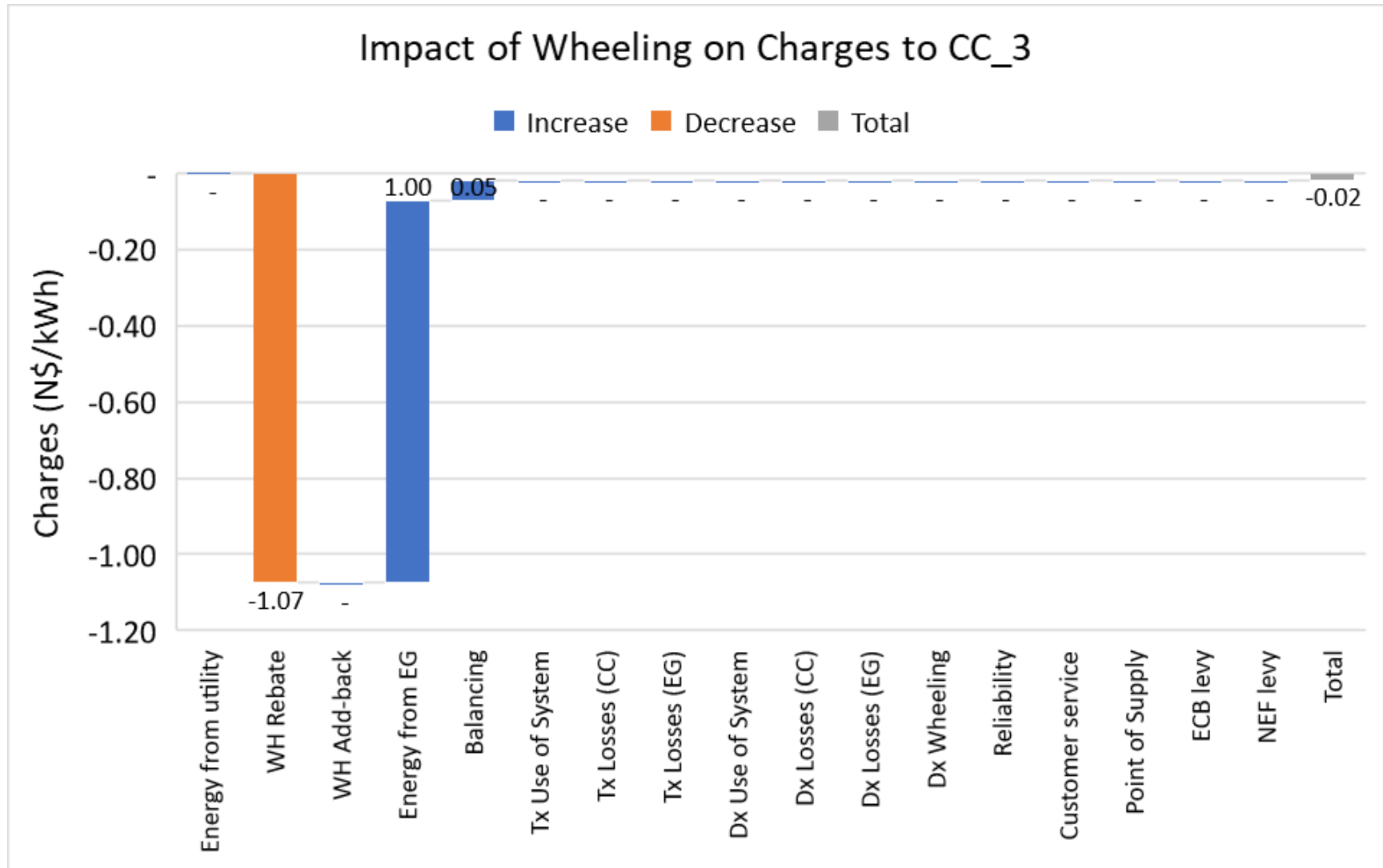
Scenario 3 – Results (No Wheeling)



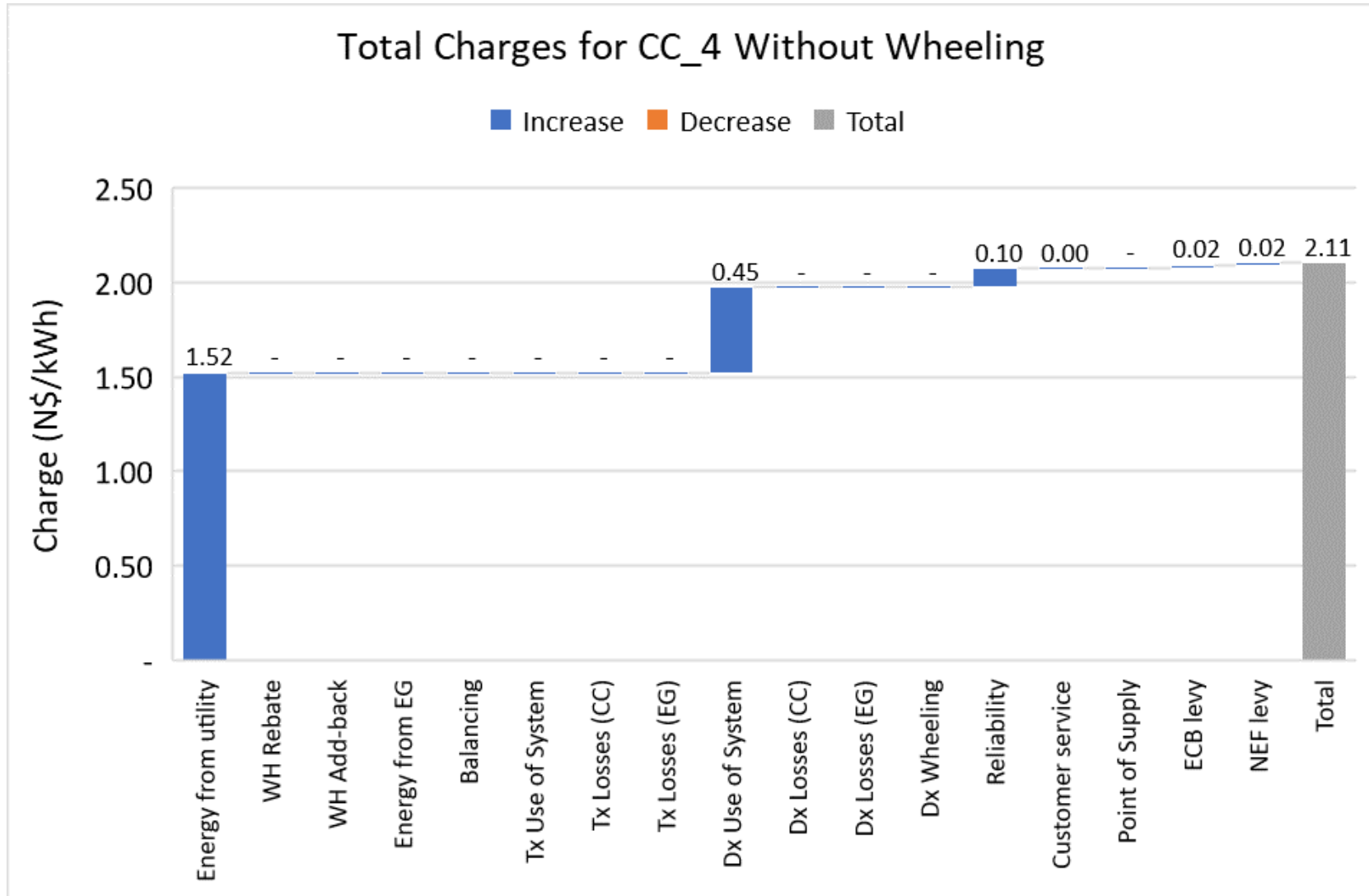
Scenario 3 – Results (Wheeling)



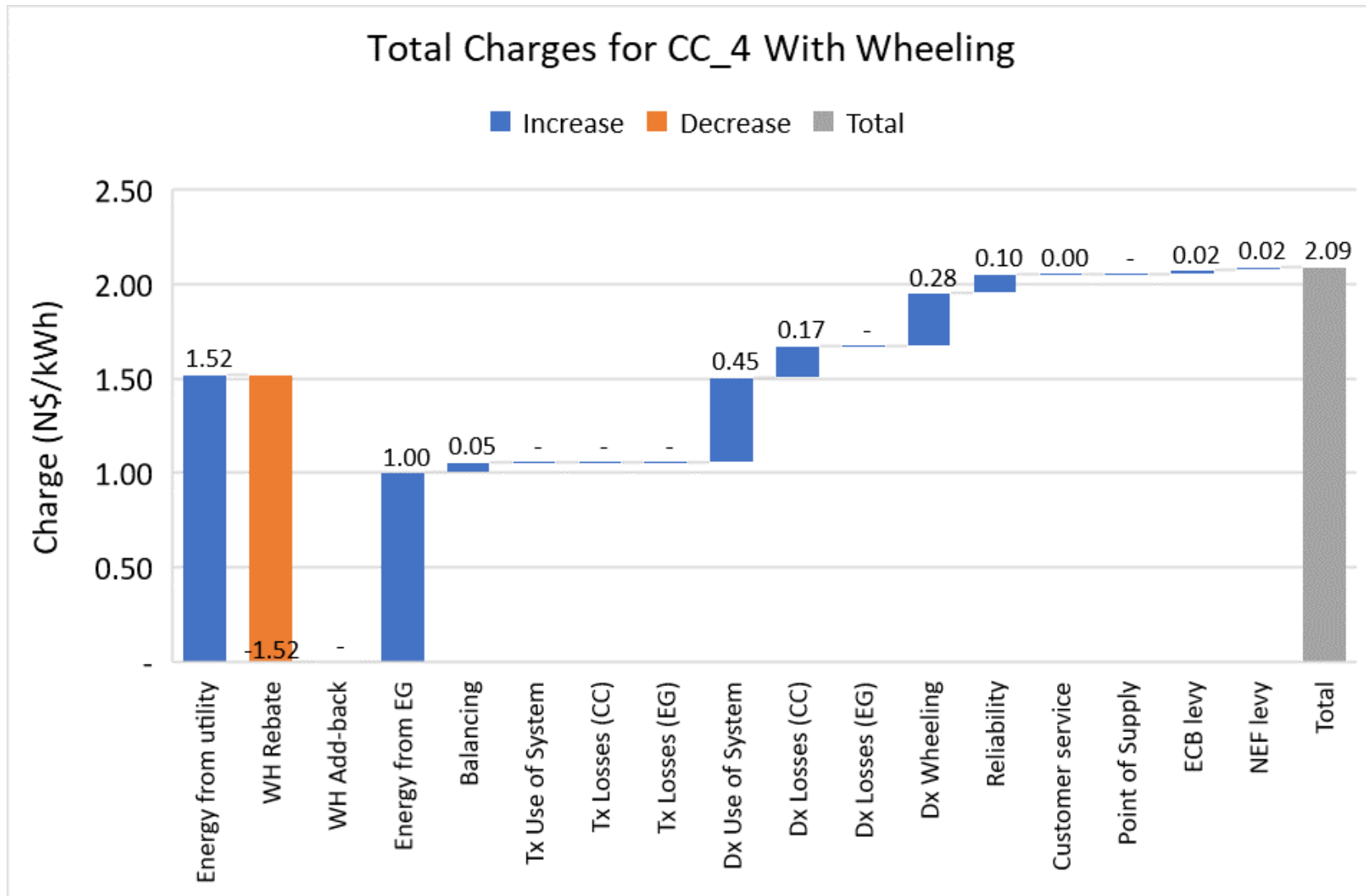
Scenario 3 – Results (Wheeling)



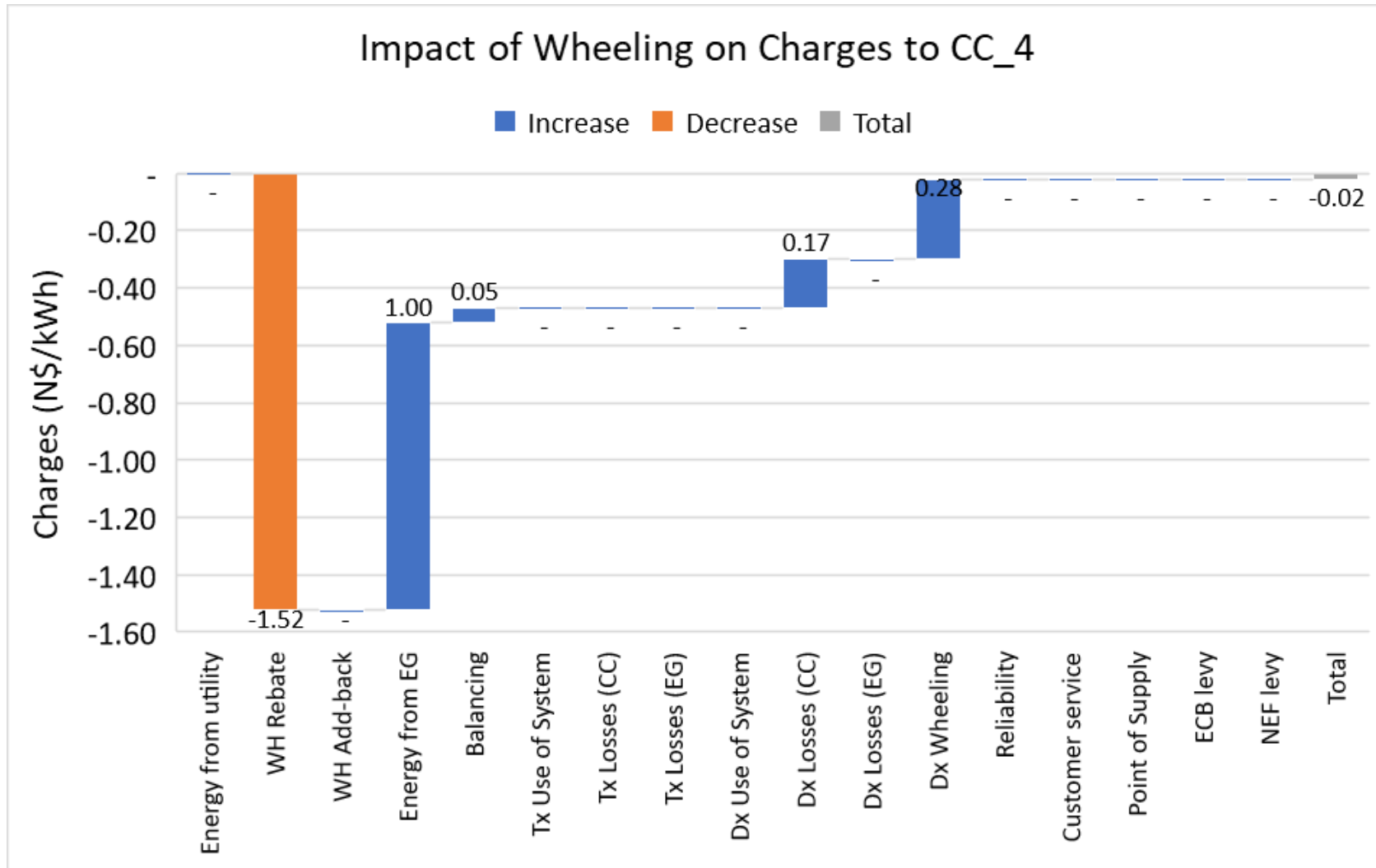
Scenario 4 – Results (No Wheeling)



Scenario 4 – Results (Wheeling)



Scenario 4 – Results (Wheeling)





END