

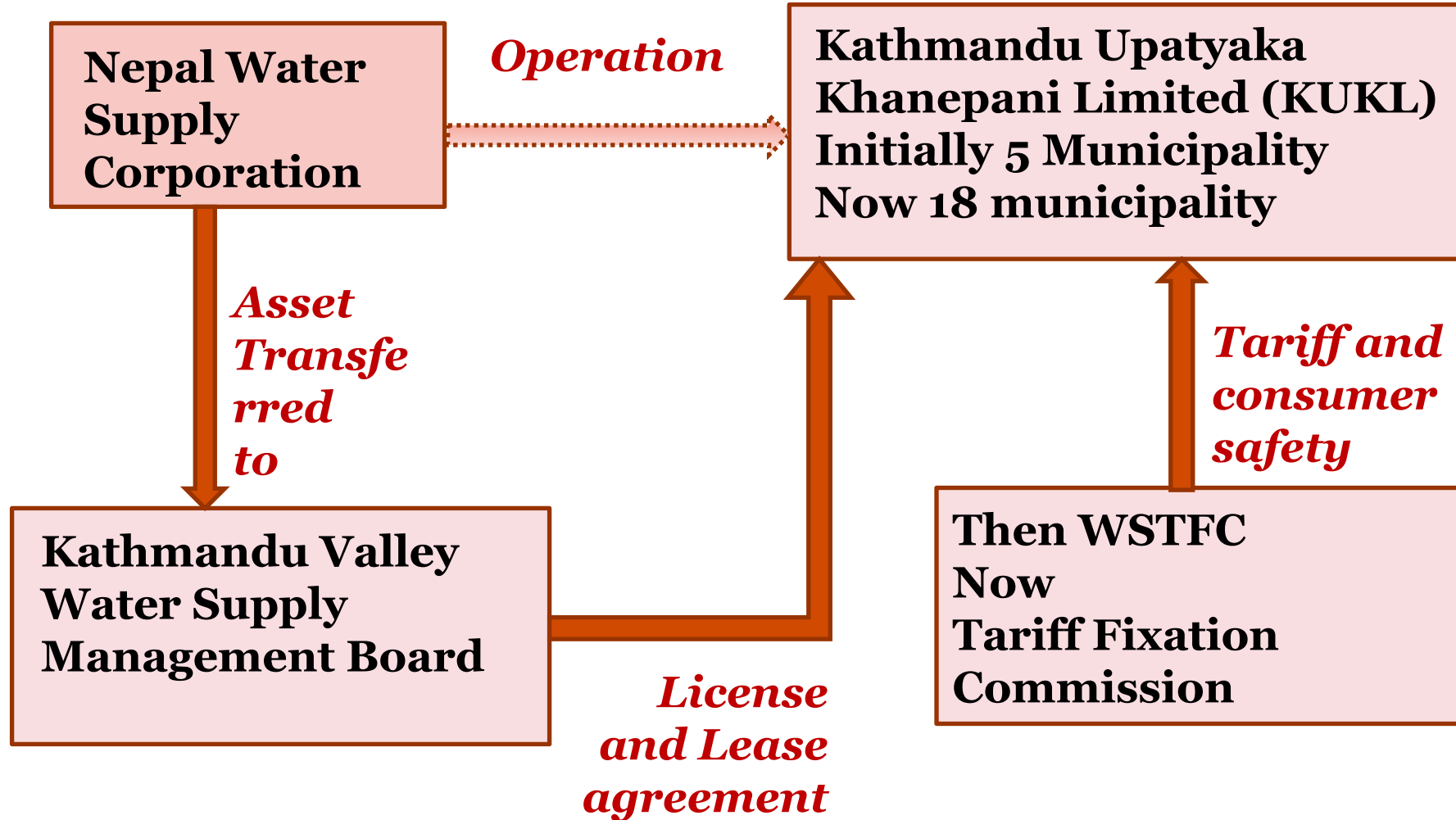


# Detailed Assessment of Institutional and Regulatory Arrangements for Water and Wastewater Service Delivery in the Kathmandu Valley

23 June 2023

2020/09/30 08:54

# KUKL as an Operator



# KUKL- Public Private Partnership

<b>S. No.</b>	<b>Share Holders</b>	<b>Share</b>
<b>1</b>	<b>Government of Nepal (GoN)</b>	<b>30%</b>
<b>2</b>	<b>Municipalities in the Valley</b>	<b>50%</b>
<b>3</b>	<b>Private Sector Institutions :</b> Federation of Nepal Chamber of Commerce and Industries and Nepal Chamber of Commerce	<b>15%</b>
<b>4</b>	<b>Employees Trust to be paid by GoN</b>	<b>5 %</b>

# Status of Urban Water and Waste Water Service Delivery

## Service Level



- **0.6 million people** of Kathmandu lack access to minimum level of water supply
- Average per capita supply from KUKL system varies from **30-50 lpcd**
- Variance in supply level between **once in 3–14 days for 1–4 hours**
- Water quality issues
- Insufficient tariffs to recover O&M costs



**About 80% of urban wastewater is discharged untreated**



**Nepal is one of the most disaster-prone country in the world**

### Causative Factors:

Critical levels of the Valley's water insecurity mainly stem from infrastructural, institutional and social factors



## Macro Impact

Water insecurity, accounts for over 2% of national GDP losses



# Project Background

**Poor service delivery-** Lack of potable water availability leading to loss of opportunity for tariff revision, deteriorating finances, shortage of cash in the system, lack of opportunity for processes and systems improvement

**Water  
Availability**



- **Financial issues:** No working capital, **no tariff revision** for last decade, poor billing and revenue collection and inadequate financial management in KUKL, **excessive lease fee**
- **Lack of proper management & staff capacity:** Lack of strong leadership, inadequate technical expertise within KUKL staff; high attrition/ retirement, inability to right-size the organisation
- **Lack of processes and systems** for better service delivery
- **KUKL BoD capacity:** KUKL's Board lacks technical expertise with frequent changes to the Board configuration and ineffective participation from shareholders
- **KVWMSB lacks** technical capacity for governance and monitoring
- **DWSSM, WSTFC, KVWSMB, KUKL, PID, Municipalities, WUC and others** have overlaps and lack coordination affecting decision making
- **Ineffective L&L-** envisaged as a PPP, both parties defaulted on their obligations due to lack of bulk water, no assistance in tariff revision, no verification of assets and dispute in valuation

# Core problems in the sector

## Poor Water and Waste-water Service Delivery to Consumers

### Weak Institutional Capacity & Accountability

### Impaired Operational Capacity

### Financial Stress

#### Inadequate water availability

- Lack of source capacity
- Delays in source augmentation
- Impaired water networks
- Limited waste water facilities

#### Poor Governance

- Poor participation & weak oversight by Board & EC
- Weak compliances & lack of management accountability
- Paucity of technical expertise at Board & EC
- Overlapping institutional roles
- Ineffective PPP
- Non-functional WSTFC

#### Weak HRM

- Lack of strong leadership and inadequate staff
- In-effective organisational structure
- Lack of policies/ SOPs/ regulations

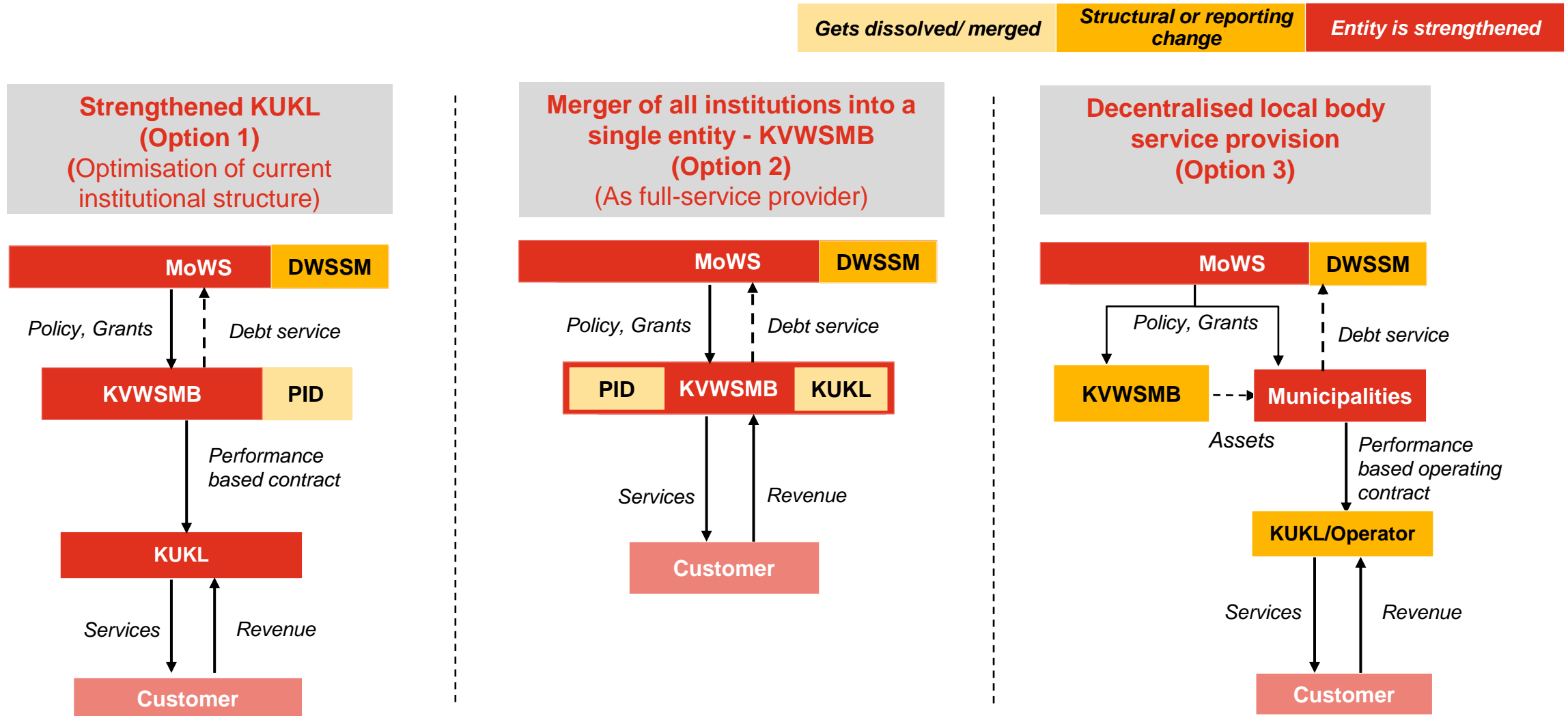
#### Inadequate IT System

- Low level of digitization in IT system
- Inadequate technical, management, financial expertise & skills

#### Poor Financial Health

- Capital & debt service liability on sector
- Lease Liability on operator
- Poor billing & revenue collection
- Inadequate tariff to recover O&M costs
- Impaired sundry debtors
- Accumulation of liabilities & losses

# Potential solution - Institutional Restructuring Options



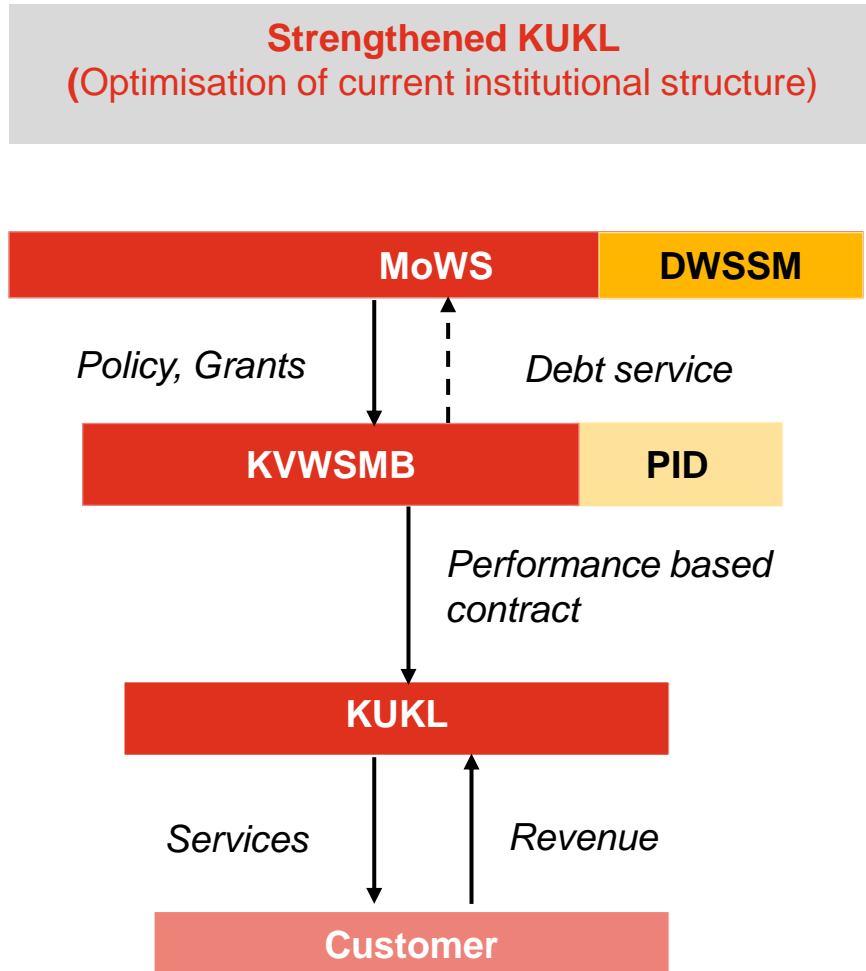
During evaluation of options, it was ascertained that **institutional option - 3** can only be implemented in long term with augmentation of bulk water and extensive capacity building of the municipalities to undertake WSS operations. It was also agreed upon in the high-level meetings (RTF, Mayors, MoF, OPMCM) that this is not feasible in the foreseeable future. Hence, this option has not been evaluated further.

# Governance & Institutional strengthening – Option 1: Strengthened KUKL

Gets dissolved/  
merged

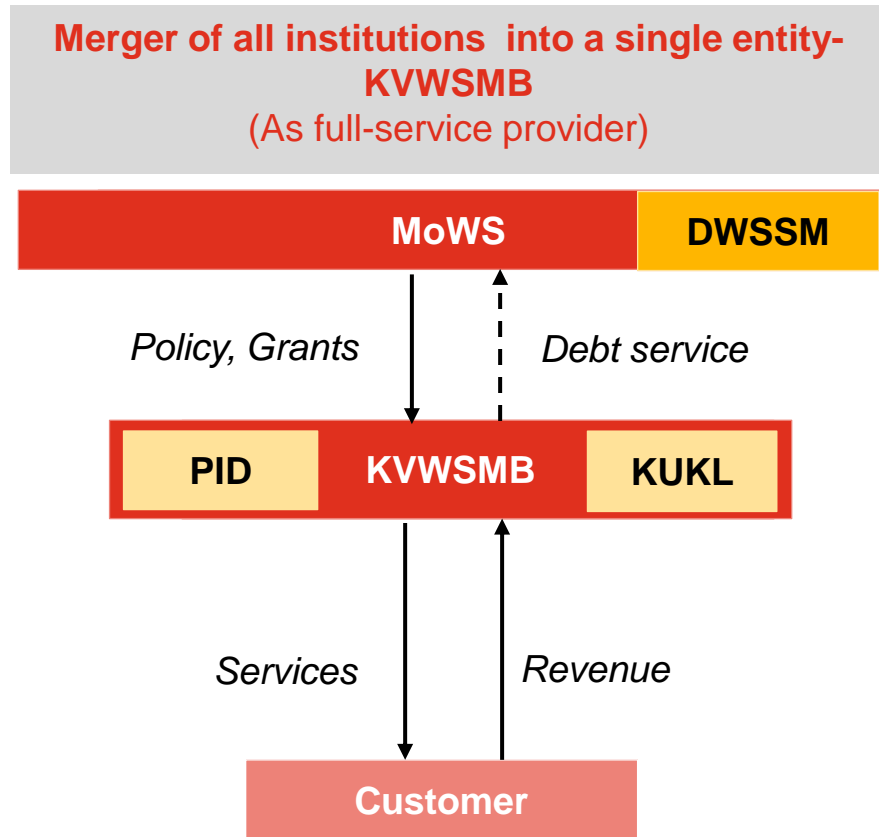
Structural or  
reporting change

Entity is  
strengthened



- Restructure KUKL Board to bring in more sector, technical and management expertise
- Replace Lease agreement with a Performance Based Contract to reward performance.
- Strengthen HR with skilled and competent manpower.
- Restructure past loans and liabilities, provide seed capital assistance for working capital requirements and absorb capital and debt service cost relating to all CAPEX.
- Merge PID with KVWSMB

# Governance & Institutional strengthening – Option 2: Merger of all institutions into a single entity



Gets dissolved/  
merged

Structural or  
reporting change

Entity is  
strengthened

- End-to-End WSS functions would be undertaken by a single entity
- Restructure EC to bring in more sector, technical and management expertise
- Strengthen HR with skilled and competent manpower across all functions in the merged entity.
- Restructure past loans and liabilities, provide seed capital assistance for working capital requirements and absorb capital and debt service cost relating to all CAPEX.
- Merge PID and KUKL with KVWSMB

NWSC Vs Option2

EC Structure

# Pros and Cons of each institutional option

Component	<b>Strengthened KUKL (Option 1)</b> (Optimisation of current institutional structure)	<b>Merger of all institutions into a single entity - KVWSMB (Option 2)</b> (As full-service provider)
<b>Pros</b>	<ul style="list-style-type: none"> <li>Minimal disruption in the institutional structure</li> <li>Relatively easier to implement - no major amendments to Acts/Rules</li> <li>Performance Based Contract to allow better monitoring and accountability with risk on tariff and revenue absorbed by KVWSMB.</li> <li>Immediate onboarding of senior leadership positions to strengthen top management and oversee restructuring process.</li> <li>Removal of Lease Fee to strengthen financials.</li> </ul>	<ul style="list-style-type: none"> <li>Asset planning, creation, commissioning and service delivery by one agency (From source to tap) - will enable consolidation, enhance process efficiency and result in better economic efficiency - this model is preferred globally.</li> <li>Recruitment / Retention of talent will be easier</li> <li>Ease of receiving financial support from GoN for asset creation/ working capital management</li> <li>Flexibility for outsourcing service delivery and its management</li> <li>Successful &amp; Replicable models in the region – Dhaka, Cambodia, Bangalore</li> <li>Replicable model within Nepal ( Bharatpur, Hetauda)</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>Successful models of this type are few in the globally</li> <li>Cultural legacy might continue to impact performance</li> <li>Resistance to change from the current systems may delay the whole reform process</li> </ul>	<ul style="list-style-type: none"> <li>Amendment in the WSMB Act</li> <li>Merger &amp; dissolution of KUKL subject to Court's approval</li> <li>Possible resistance to new service regulations/rules.</li> </ul>

# Potential Solution for Financial sustainability - Financial restructuring, Capital infusion and Tariff revision (Irrespective of institutional options)

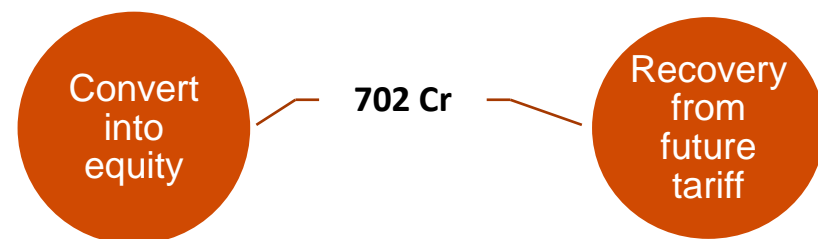
## KUKL's Inability to service past & future loans and Debts

- At current tariff and cash flow, KUKL has no capacity to service past loans and liabilities
  - About NPR 702 crores of unserviceable loans/liabilities in the books of KUKL/KVWSMB
- A Business-As-Usual Scenario mean continuous cash losses to KUKL and KVWSMB –
  - Yearly O&M losses can be around NPR 120 crores upto FY 2030 increasing to NPR 220 crores after FY 2030
- Future investments into the sector will be severely impaired if the current position is allowed to be continued.

## Restructuring, Tariff Revision & Recapitalisation are immediate priorities

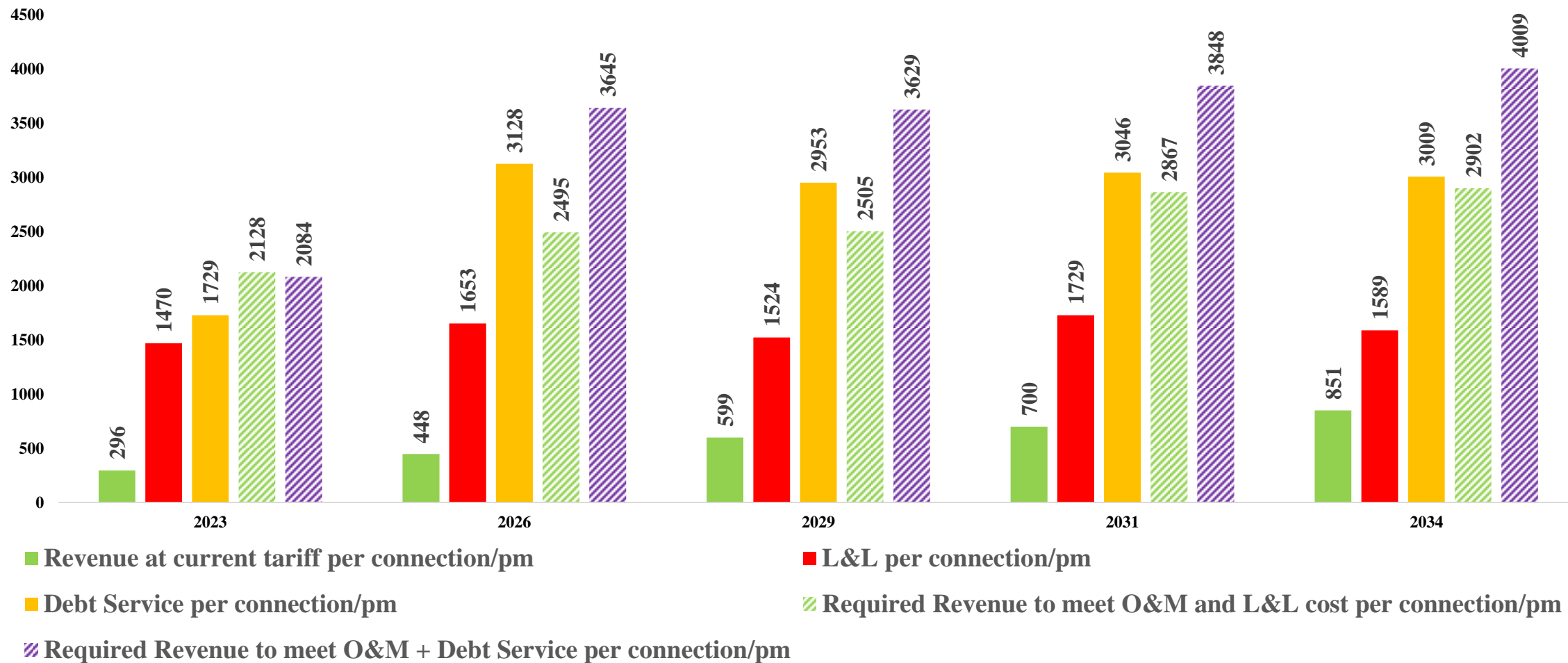
- GoN to take a **policy decision on tariff principle** - recover (a) full O&M Cost' and a % of CAPEX or (b) full O&M and moratorium of capex recovery till service level improves. or (c). as GON deems fit.
- Strengthen financial capacity of WSS institutions, primarily KUKL/KVWSMB through:
  - Immediate financial restructuring required for past loans & liabilities
  - Recapitalisation of KUKL and KVWSMB to protect their capacity to transact
  - Strengthen financial management policies & capacities

Past Loans/Liabilities	KUKL (NPR Cr)	KVWS MB (NPR Cr)	Total (NPR Cr)
Cash loan to be paid to KVWSMB	158	-	<b>158</b>
Lease & License dues	218	-	<b>218</b>
Sundry debtors to be written-off	194	-	<b>194</b>
Losses on books of KVWSMB	-	132	<b>132</b>
<b>Total Impact</b>	<b>570</b>	<b>132</b>	<b>702</b>



# Current Scenario : Kathmandu WSS Sector will continue to suffer if Tariffs are not revised ( A comparison of Monthly tariff, O&M Cost and Full Cost Recovery per connection)

## Comparison of O&M + L&L with O&M + Debt Service Cost



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Thank you

# Cost Recovery Options

- (A comparison of Monthly tariff, Full Cost per connection in all three alternatives)

## Current Scenario ■

- Full O&M recovery + 42% of total project cost recovery from end users

## Alternate - 1 (As per NUWSSP) ■

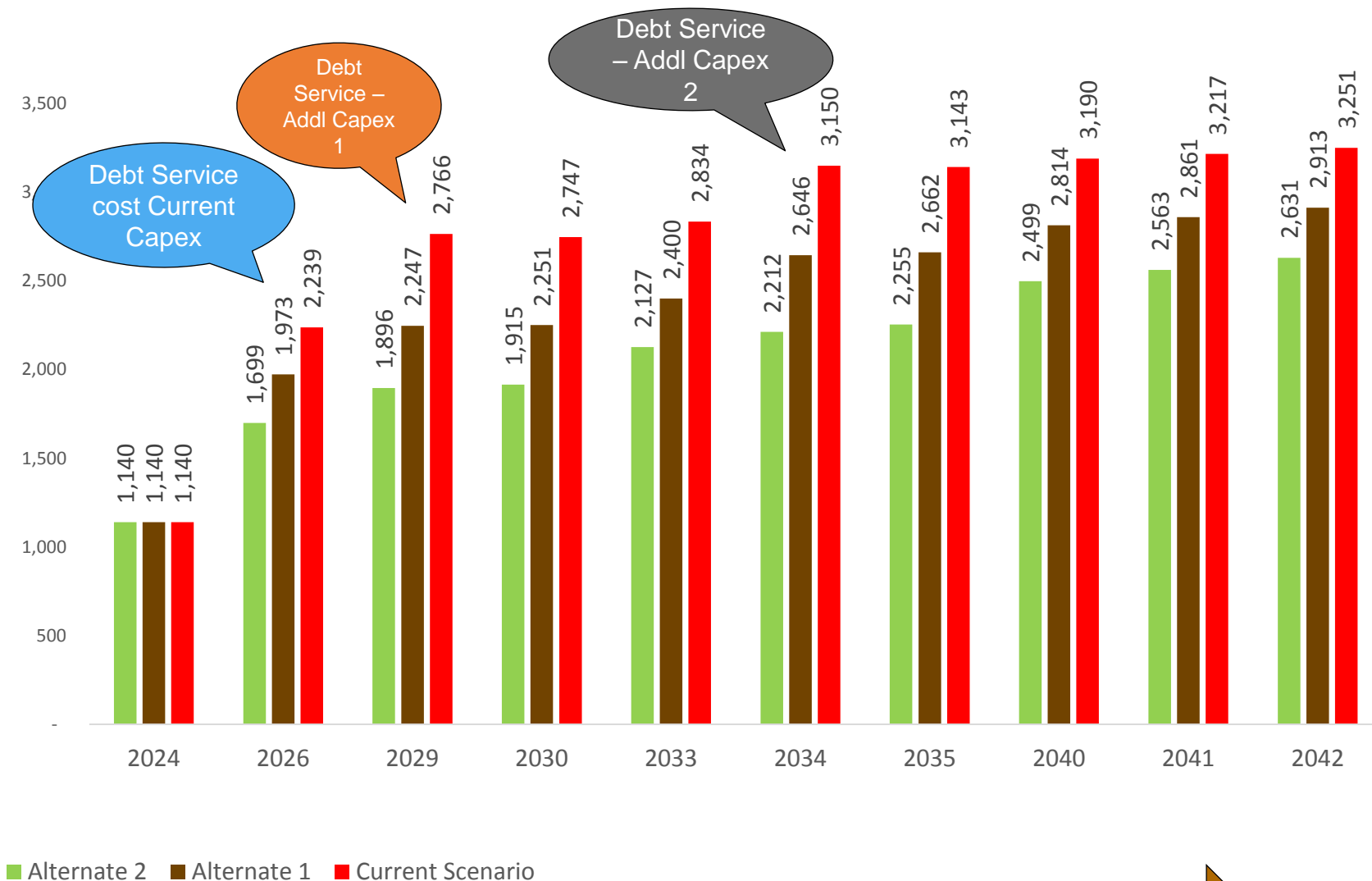
- Full O&M recovery + 30% of total project cost

## Alternate - 2 ■

- Full O&M + 30 % of Network project cost

**Observations:** If debt is to be recovered from Tariff,

- **Current:** ■ One time increase in tariff of 3.3 times (~ NPR 1140/connection/ month) and annual increase of 11%
- **Alternate 1:** ■ One time increase in tariff of 3.3 times (~ NPR 1140/ connection / month) and annual increase of 9 %
- **Alternate 2:** ■ :One time increase in tariff of 3.3 times (~ NPR 1140/ connection / month) and annual increase of 7%



■ Alternate 2 ■ Alternate 1 ■ Current Scenario

Alternate - 1

Alternate - 2

# Key actions over a period of 42 months – Option 1: Strengthened KUKL

## Improved Water and Wastewater Service Delivery to Consumers

*Enhanced Institutional Capacity & Board Oversight*

*Improved operational capacity and efficiency*

*Financial Sustainability*

Improved water availability

Enhanced Governance

Strengthened HRM and adequate IT system

Improved Financial Health

- Adequate Source Capacity
- Improved Source Augmentation
- Laying of Water Networks
- Improved waste water facility

*Taken up through parallel intervention*

- Amend AOA and Acts to streamline inter-institutional roles, responsibility & reporting
- Operationalize TDC
- Performance monitoring & payment through PBC
- Restructure and upskill KUKL BoD, KVWSMB EC
- Replace Lease agreement with PBC

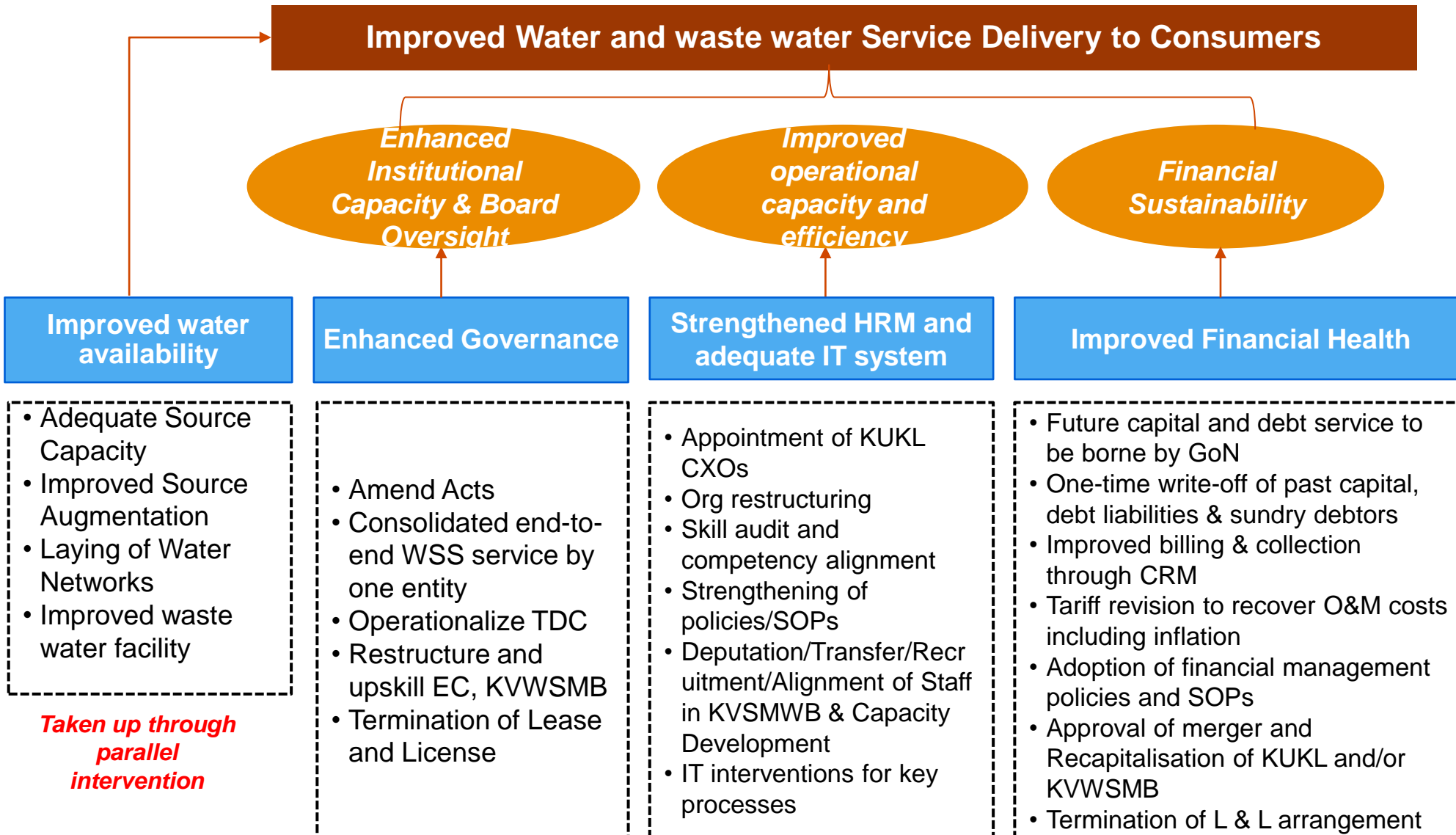
- Appointment of KUKL CXOs
- Org restructuring
- Skill audit and competency alignment
- Strengthening of policies/SOPs
- New Cadre rules and service conditions
- Employee recruitment, training & Capacity Development
- IT interventions for key processes

- Decision for future capital and debt service to be borne by GoN
- One-time write-off of past capital, debt liabilities & sundry debtors
- Improved billing & collection through CRM
- Adoption of financial management policies and SOPs
- Tariff revision to recover O&M costs including inflation
- Recapitalisation of KUKL and/or KVWSMB

### GON Policy Actions Needed

1. Decision to Restructure through one of the two options
2. Decision on cost recovery principle from end user through Tariffs
3. Decision on past loans and liabilities of KUKL and KVWSMB

# Key actions over a period of 42 months – Option 2: Merger of all institutions into a single entity



- GoN Policy Actions Needed**
1. Decision to Restructure through one of the two options
  2. Decision on cost recovery principle from end user through Tariffs
  3. Decision on past loans and liabilities of KUKL and KVWSMB
  4. Amendment of WSMB Act

# Decisions and Actions required from MoF to facilitate WSS restructure

## Policy decisions to facilitate WSS Restructure

Decision on cost recovery principle from end user through tariffs ('including possibility of moratorium of capex recovery till service level improves)

Decision to recapitalise KUKL/KVWSMB based on gap in financing projected by the Business Plans

Decision to inject new cash in to KUKL/KVWSMB until such time the O&M costs are not fully recovered from end user tariff.

## Actions to facilitate WSS Restructure

### Approval for Immediate financial restructuring of KUKL/KVWSMB

- One time write off or Conversion into equity of past loans and liabilities of KUKL – app NPR 570 crores
- Restore the eroded Board Fund in KVSWMB – app NPR 132 crores (cash infusion)

### Approval of new Business Plans for KUKL /KVWSMB

- Business plans will provide strategic directions and gap in financing for 5 to 10 years ahead

### Recapitalisation of KUKL/KVWSMB

- Based on Business Plan projections on gap in financing recapitalise KUKL/KVWSMB for long term sustainability
- In the interim new cash injection into KUKL for the day-to-day O&M cost until total restructuring is complete

### Approval for Merger

- Approve merger proposal of KUKL with KVWSMB if Option 2 of institutional restructuring is opted

## Similarities and Differences between NWSC and Option 2 (Single Entity for whole value chain)

Core areas	Old Scenario - NWSC	Option 2 - Single Entity for whole value chain
<b>Institutional Set Up</b>	<ul style="list-style-type: none"> <li>NWSC planned, owned, operated and managed the system, including water tariff determination</li> </ul>	<ul style="list-style-type: none"> <li>Asset planning, construction, ownership, and operation &amp; management under single entity.</li> </ul>
<b>Geographical coverage</b>	<ul style="list-style-type: none"> <li><b>All regions</b> including Kathmandu Valley</li> </ul>	<ul style="list-style-type: none"> <li><b>Only Kathmandu Valley</b> region</li> </ul>
<b>Board Structure</b>	<ul style="list-style-type: none"> <li>The Board of NWSC was all <b>Government nominated</b></li> </ul>	<ul style="list-style-type: none"> <li>Municipalities will have representation on EC - will facilitate direct client interface</li> <li>Aligned with <b>new constitutional mandate</b></li> <li>EC will be more <b>professionalised</b> with representation from municipalities, MoWS, MoF and technical experts.</li> </ul>

## Similarities and Differences between NWSC and Option 2 (Single Entity for whole value chain)

Core areas	Old Scenario - NWSC	Option 2 - Single Entity for whole value chain
<b>Governance</b>	<ul style="list-style-type: none"> <li>Operated as <b>government entity</b></li> </ul>	<ul style="list-style-type: none"> <li>Fully <b>Autonomous Entity</b> structured to function on <b>corporate</b> principles</li> <li>Improved <b>Accountability</b> to customers as municipalities have a stake in the EC.</li> <li><b>Efficiency gains</b> through better staffing, process consolidation, effective decision making and IT interventions</li> <li>Function as per WSMB act</li> </ul>
<b>Staff Recruitment &amp; Retention</b>	<ul style="list-style-type: none"> <li>Government staff – lesser flexibility / incentives for better performance</li> </ul>	<ul style="list-style-type: none"> <li>Ability to recruit and retain skilled and competent staff from market</li> <li>Performance based incentivisation</li> <li>Own staff rules and regulations and HR processes.</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>Operations was funded by Tariffs &amp; GoN Budgets</li> </ul>	<ul style="list-style-type: none"> <li>O&amp;M will be funded by user-tariffs based on commercial prudence.</li> <li>CAPEX to be supported by GoN</li> </ul>

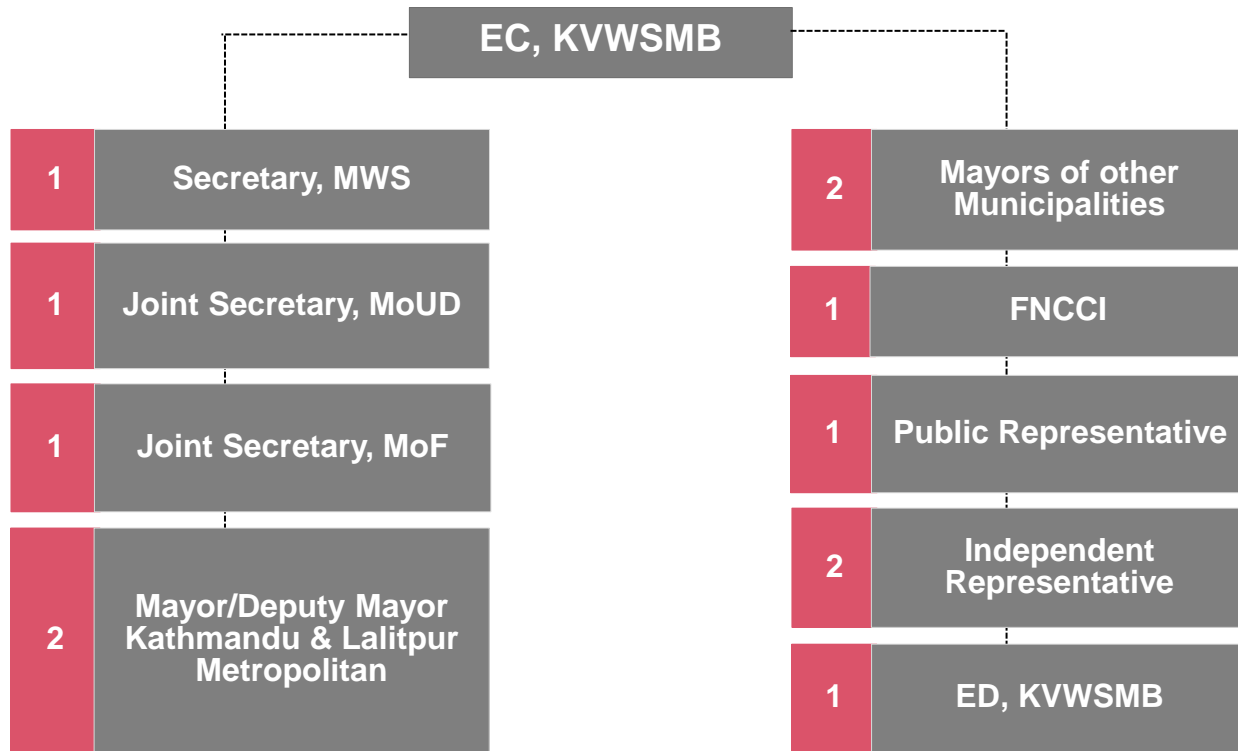
## Similarities and Differences between NWSC and Option 2 (Single Entity for whole value chain)

Core areas	Old Scenario - NWSC	Option 2 - Single Entity for whole value chain
<b>Commercial and Financial prudence</b>	<ul style="list-style-type: none"><li>NWSC being a GON body, opportunity to run WSS on commercial principles was limited.</li></ul>	<ul style="list-style-type: none"><li>Will work on <b>commercial principles</b> – Focus on customer satisfaction and operational efficiency, full O&amp;M cost recovery, Financial and Risk Management Policies</li><li><b>Compliance with NFRS</b> to provide transparency and better financial discipline</li></ul>
<b>Tariff Determination</b>	<ul style="list-style-type: none"><li>NWSC</li></ul>	<ul style="list-style-type: none"><li><b>Independent Tariff Determination Commission</b></li></ul>



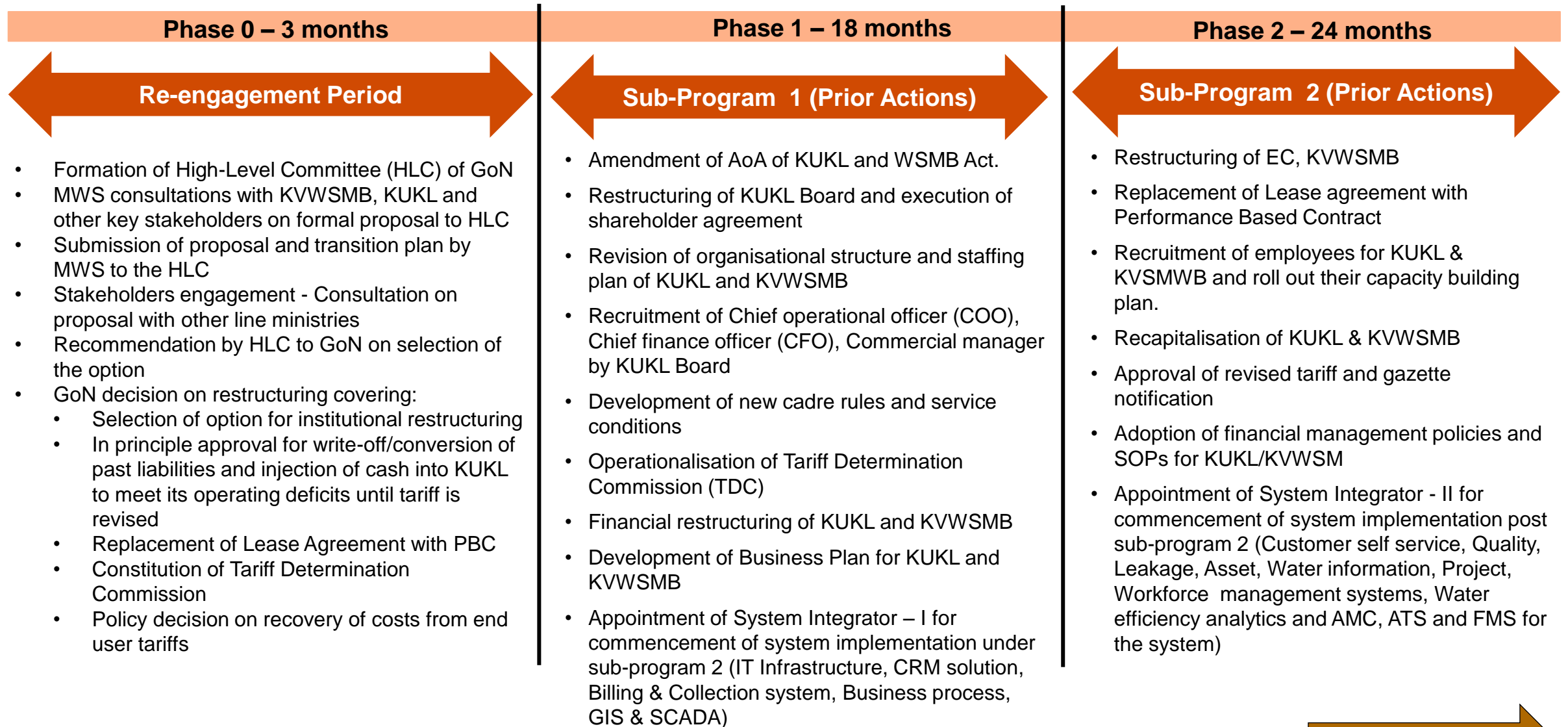
# Proposed structure of Executive Committee (EC), KVWSMB

- 12 members
- Equal representation to municipalities and nominating SMEs to strengthen the technical and financial capacities of KVWSMB.
- GoN should have equal representation as Municipalities and shall be Chair of the Committee

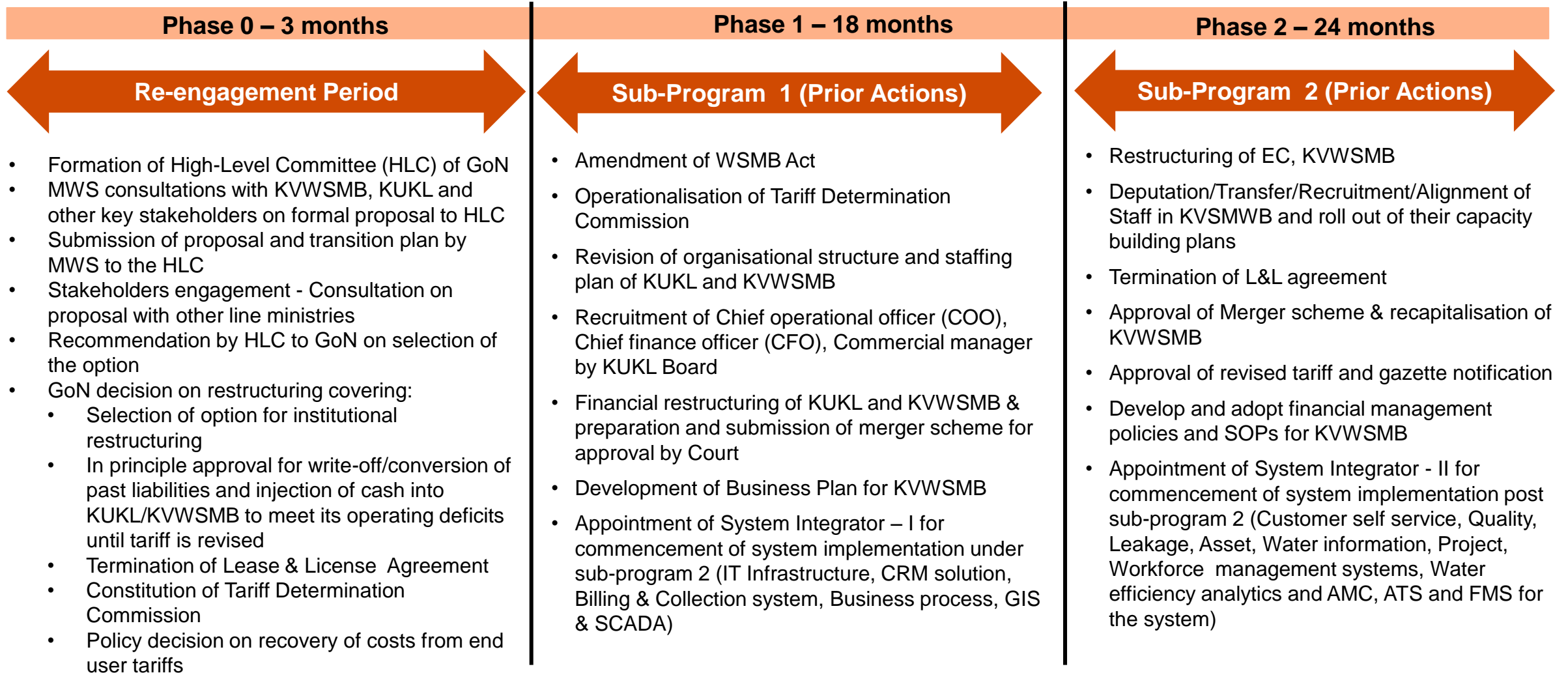


- **Secretary, MWS:** Chairperson of the Committee. To ensure that the policy level decision, fund flow is being fulfilled by acting as a link between the Committee and MWS/MoF.
- **Joint Secretary, MoUD:** representation in the Committee
- **Joint Secretary, MoF:** representation in the Committee
- **Representatives from Municipalities:** Either Mayor or Deputy Mayor representation from Kathmandu Metropolitan and Lalitpur Sub-metropolitan
- **Other Municipalities:** Two representatives nominated from the 16 municipalities within the geographical jurisdiction of the Board on a rotation basis
- **Chairperson of the local chamber of commerce and industry**
- **Independent Directors:** Two person nominated by the Committee from local non-governmental organizations engaged in the field of water supply or sanitation service.
- **Public representative:** To bring in an outside perspective, and ensure consumers are fairly represented.
- **Executive Director, KVWSMB:** Member secretary of the committee; Should be recruited through open competition and should hold rank above Joint Secretary and below Principal Secretary

# Transition Plan – Option 1



# Transition Plan – Option 2



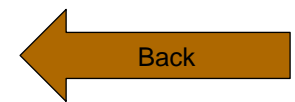
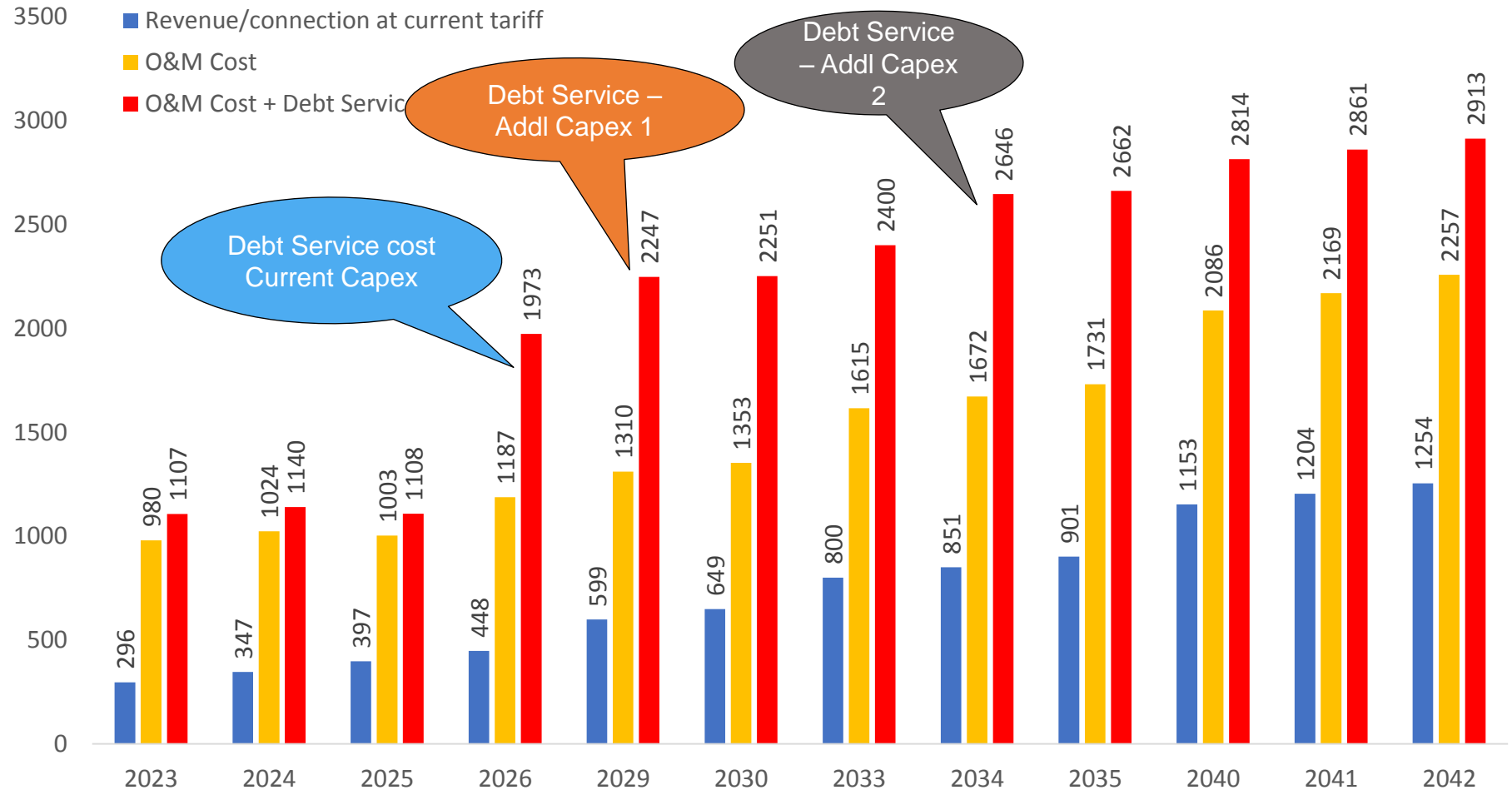
# WSS Sector will continue to suffer if Tariffs are not revised either to cover O&M or O&M + Debt Service Costs - A comparison of Monthly tariff, O&M Cost and Full Cost per connection

## Alternate – 1 (As per UWSA)

- 30% of project cost recovery from end users

### Observations:

- To recover O&M + 30% Loan, tariff to be revised by **at least 3.3x** (~ NPR 1140/connection /month) and annual increase of 9%



# WSS Sector will continue to suffer if Tariffs are not revised either to cover O&M or O&M + Debt Service Costs - A comparison of Monthly tariff, O&M Cost and Full Cost per connection

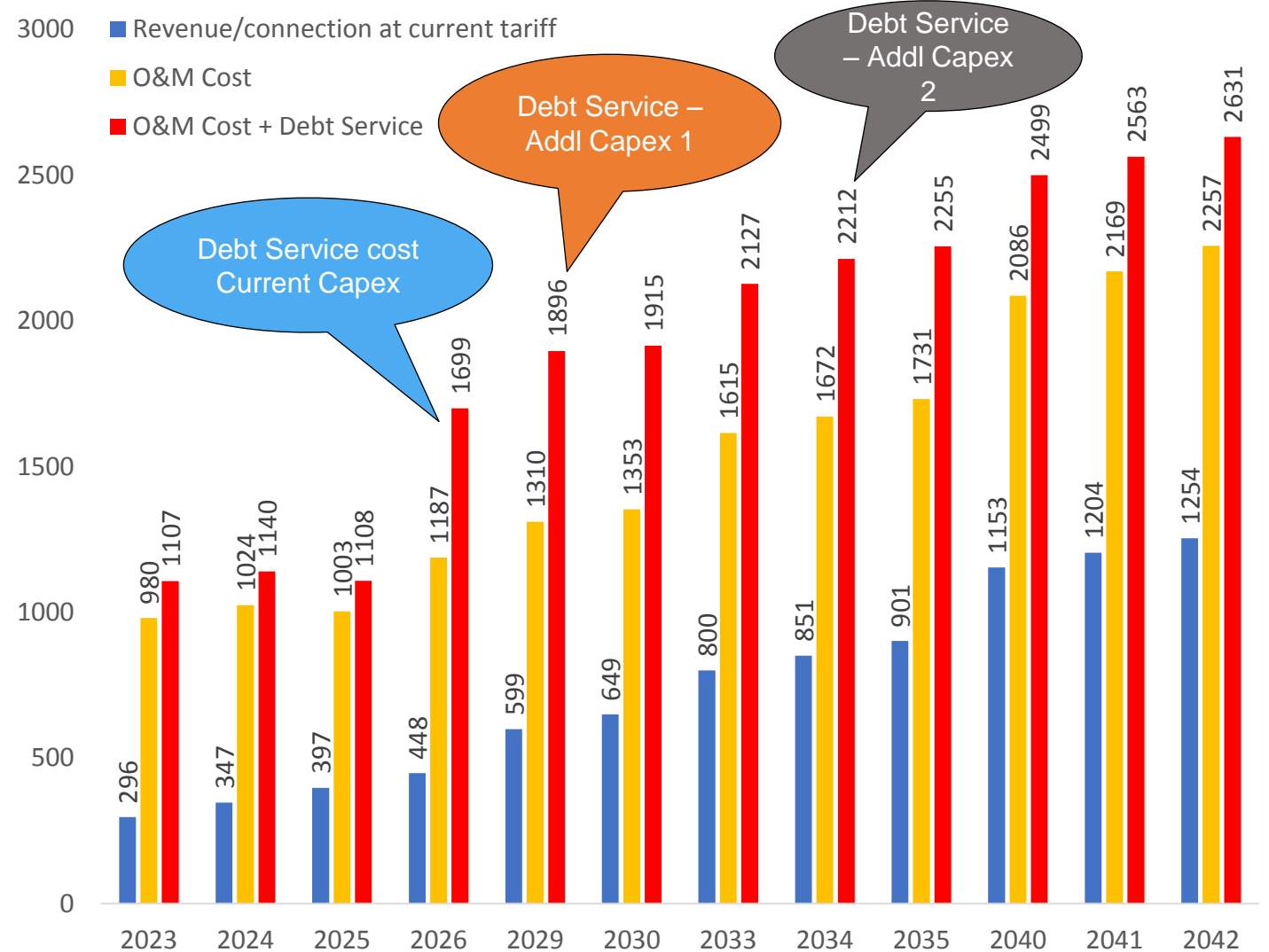
## Alternate - 2

- Segregation of Project Cost into Bulk and Networks cost as shown below:
- 100% of Bulk assets costs as Grant and 70% of Network Asset Cost as Grant
- 30% cost recovery in respect of Network Assets from end users

### Observations:

- To recover O&M + 30% network costs, tariff to be revised by **atleast 3.3x (~ NPR 1140/connection /month)** and **annual increase of 7%**

	Current Capex	Addl Capex 1	Addl Capex 2		
Bulk Assets	40%	45%	80%		
Network Assets	60%	55%	20%		
Alternate 2 - Loan and Grant Assumption					
Grant	100% of Bulk + 70% of Network Assets				
Loan	30% of Network Assets				
	Current Capex	Addl Capex 1	Addl Capex 2	Total	
Project Cost-NPR Crores	7500	2830	2840	13,170	100%
Grant	6150	2363	2670	11,183	85%
Loan	1350	467	170	1,987	15%



# National Urban Water Supply and Sanitation Sector Policy, 2009 (Extract)

## Section 9.4 - Cost Recovery and Financial Sustainability

ii. To ensure financial sustainability of water supply services a fixed percentage of capital and O&M costs shall be recovered from consumers and local governments. As a flat and uniform percentage of contribution cannot be applied for all urban centres across the spectrum, the level of contribution for implementation will depend upon the size and category of the urban center under consideration. Cost recovery will be based mainly on the following principles:

- a. A fixed percentage of capital investment costs in cash and in kind depending upon the socio-economic classification, project life cycle cost, technological choices etc. of each urban settlements generally being not less than 30 percent of such costs.
- b. 100 percent of operation and maintenance costs unless targeted subsidies are available for systems falling under prescribed guidelines
- c. 100 percent of any loan repayment costs, which have been borrowed by consumers, as a part of their contribution.