



Western Cape
Government

FOR YOU

Department of Economic Development and Tourism

MER municipal procurement including pooled buying

Western Cape Energy Workshop

27 July 2022

Overall lead & support

Municipal Procurement

- Pioneering project(s)
- CCT support
- MER Fund

Private Sector Enablement

- Private sector support
- Wheeling
- SSEG

Enabling infrastructure

- Grid and transmission infrastructure upgrades
- Battery storage

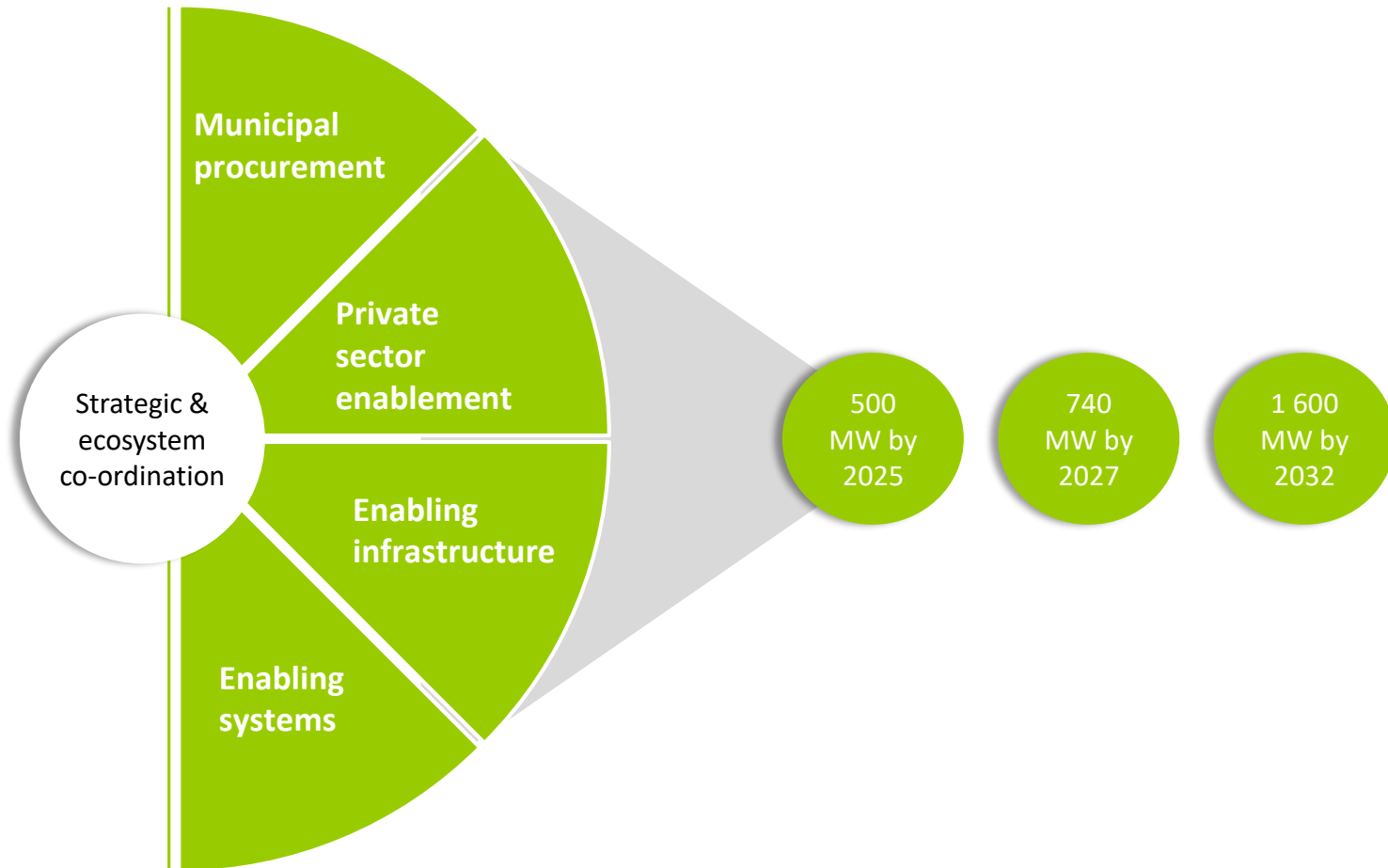
Enabling systems

- mSPV
- Financial and funding systems
- Demand and supply enablement

Strategic development & management

MER initiative support & co-ordination

Towards Western Cape energy resilience

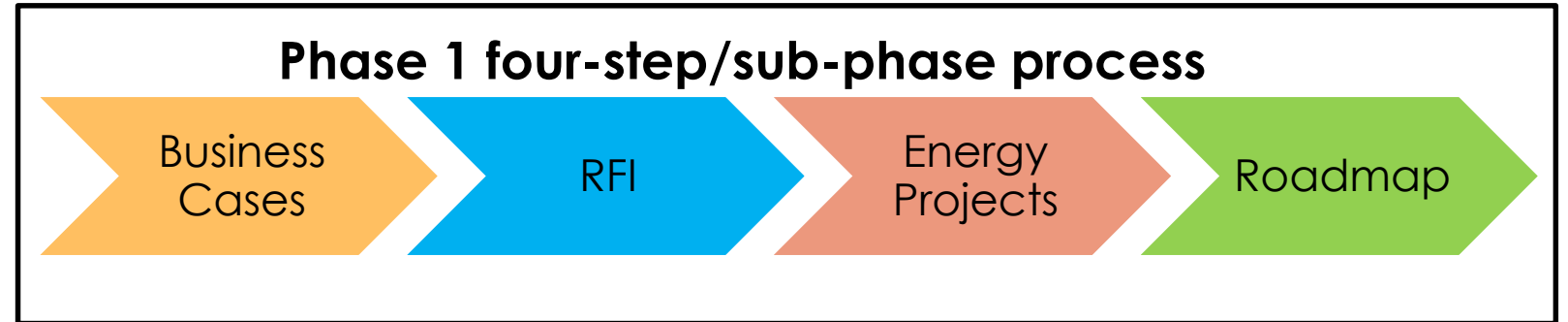


MER Phase 1 to select pioneering projects

Phase 1 outcomes

Candidate municipalities

- Development of business cases
- Pioneering concepts/ projects identification
- Selection/Pre-Feasibility pioneering projects
- Pioneering Projects Roadmap

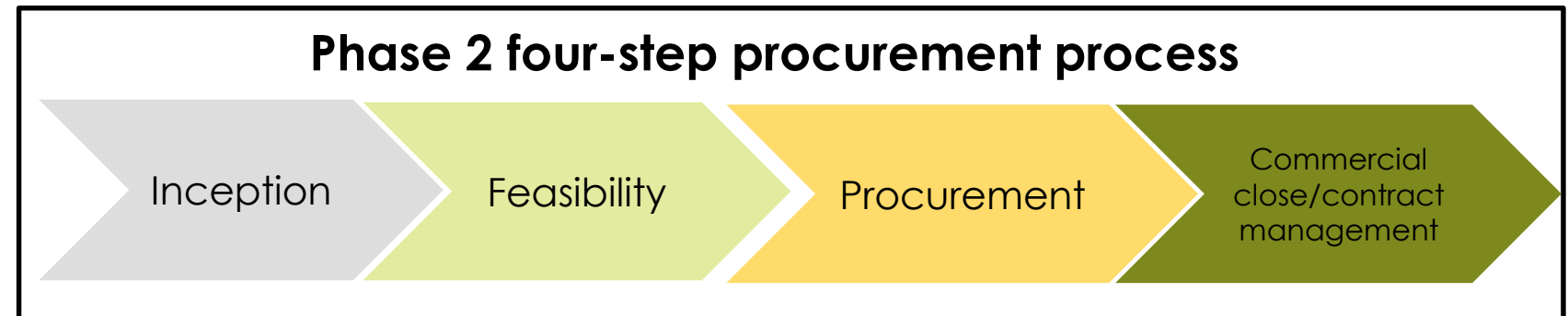


MER Phase 2 to implement pioneering projects

Phase 2 Outcomes

Implementation of pioneering projects

- key procurement process steps to contract IPP for new gen capacity



Key findings from Business Cases



- Four business cases:
 - IPP at utility scale: > 10MW, based upon technical thresholds
 - Distributed Generation at sub-utility scale: 1 – 10MW
 - SSEG: < 1MW based upon NERSA's (then) licencing/registration requirements
 - Large-scale battery energy storage: > 1MW installation, based upon draft Battery Grid Code
- Comprehensive regulatory review undertaken. Key findings:
 - Municipalities have Constitutional authority to procure electricity
 - (Advisory team view) Section 34 determination not required
 - Feasibility Study may be required in terms of NewGen Regulations – linked to licencing
 - Section 33 process for long-term contracts is required

Key findings from Business Cases



- Consideration of alternative technologies:

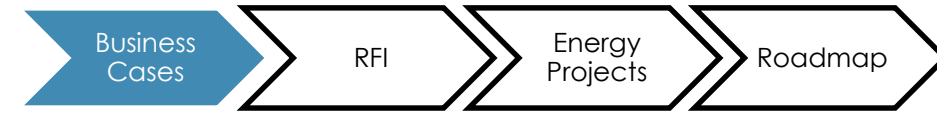
- Range of technologies:

- dispatchable renewables – biogas, landfill gas, biomass, small hydro, MSW
 - self-dispatched renewables – wind, solar PV
 - standalone battery (grid-charge)

- Key findings from financial: impact on cost of supply

	Indicative tariff	Municipal utility scale programme (>10MW)	Distributed generation programme (<10MW)
Onshore wind	R850 / MWh	-0.24%	-0.31%
Solar PV	R755 / MWh	-0.93%	-0.94%
Small hydro	R1200 / MWh	5.88%	4.93%
MSW	R2000 / MWh	17.71%	16.88%
Landfill gas	R1300 / MWh	4.93%	4.26%
Biomass	R1640 / MWh	11.87%	11.03%
Biogas	R1440 / MWh	7.87%	7.09%
SSEG			
Battery storage	R2345 / MWh		

Key findings from Business Cases



● Project selection process:

- based upon MPPP framework
 - demonstrate need (long-term demand forecast)
 - consider alternative solutions
 - research regulatory framework – identify legal impediments
 - consider financial, technical, human resources capacity
 - model cost impact (affordability) and financial obligation

● Preliminary list of projects:

- municipal projects conceptual and unsuitable to meet timeframes re strategic outcomes

● Recommendation to undertake an RFI

Key findings from Request for Information



- Information solicited from public sector (municipalities) and private sector developers across all power generation technologies. Although only renewable energy generation technologies were considered as part of the assessment
- Good response from municipalities and developers – valuable intelligence to inform the MER Initiative
- Outcome of assessment identified where the highest level of interest (technologies and location) was from developers
- Assessment of eligible projects in and for the 6 candidate municipalities

	Municipality name	PV Projects	OW Projects
		Capacity (MW)	Capacity (MW)
1	Municipal 1	333	437
2	Municipal 2	427	294
3	Municipal 3	171	10
4	Municipal 4	282	106
5	Municipal 5	12	150
6	Municipal 6	34	0
	Total	1258	996

Pioneering projects selected based on RFI response assessment and scope

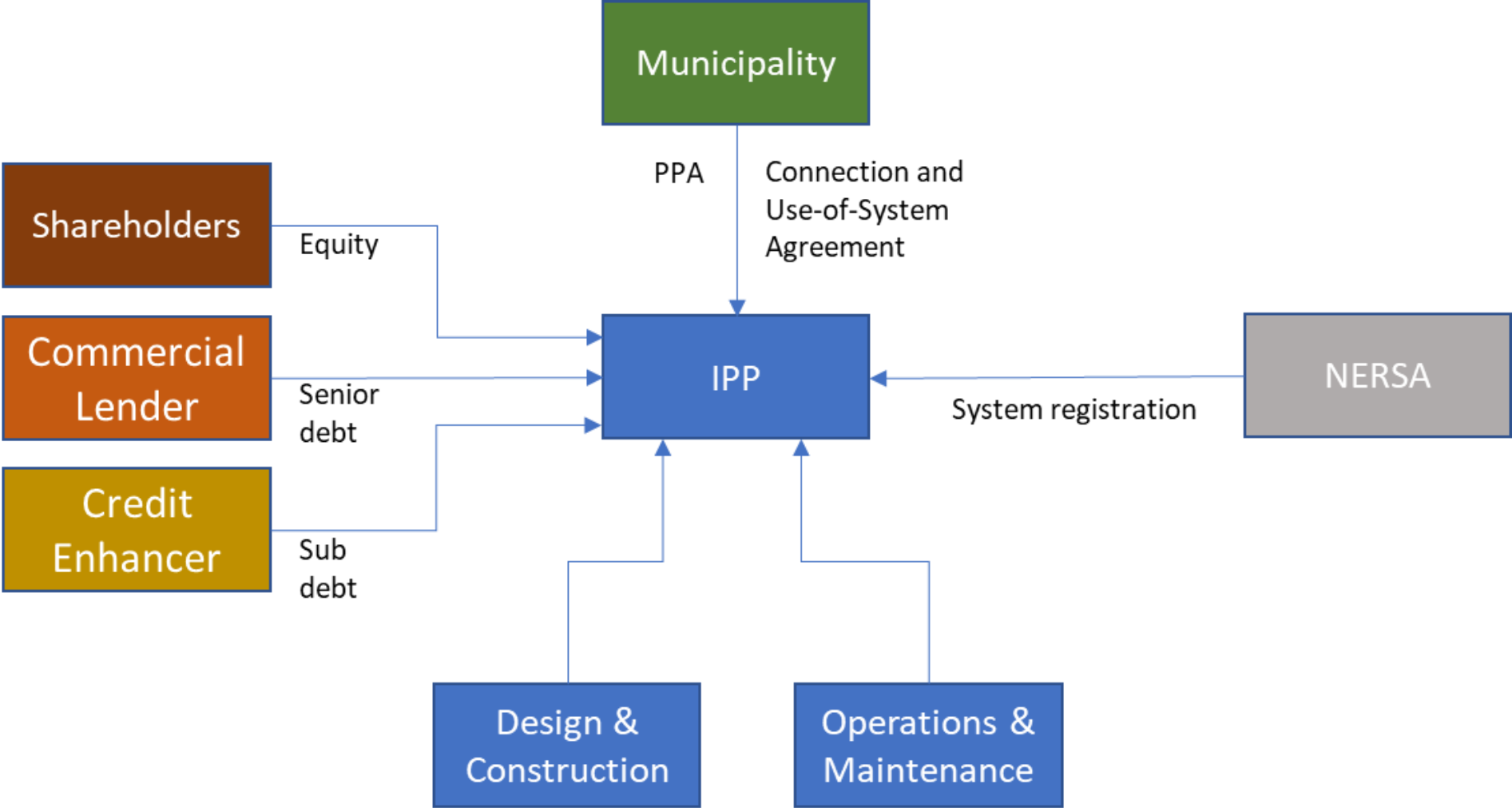


Pioneering project group	Municipality	RE generation technology	Type
Project 1	Municipality 1	Solar PV or Wind	Individual, Embedded, IPP
Project 2	Municipality 2	Solar PV	Individual, Embedded, IPP
Project 3	Municipality 3	Solar PV	Individual, Embedded, IPP
Project 4	Municipality 4	Solar PV	Individual, Embedded, IPP
Project 5	All 4 municipalities, Multijurisdictional entity	Solar PV	Pooled, Wheeled, IPP

Commercial Structure: Pioneering Projects 1-4



Recall proposed commercial structure for Pioneering Projects 1-4: Municipality purchases electricity from IPP



What is the MSPV?

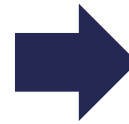
MSPV as per PP5

“At the heart of the commercial arrangement for Pioneering Project 5 is the establishment of the MSPV as the 'pooled' buyer of electricity from an IPP

- Relevant to the participating candidate municipalities

It is also pertinent to point out that in establishing any MSPV the governance structures and the relevant policies would need to be put in place. Given that the procurement process (pursuant to which the MSPV would enter into a PPA with an IPP) is central to this Report, arguably, the most important policy that is required would be the **supply chain management policy.**”

(pg 16/8, roadmap)



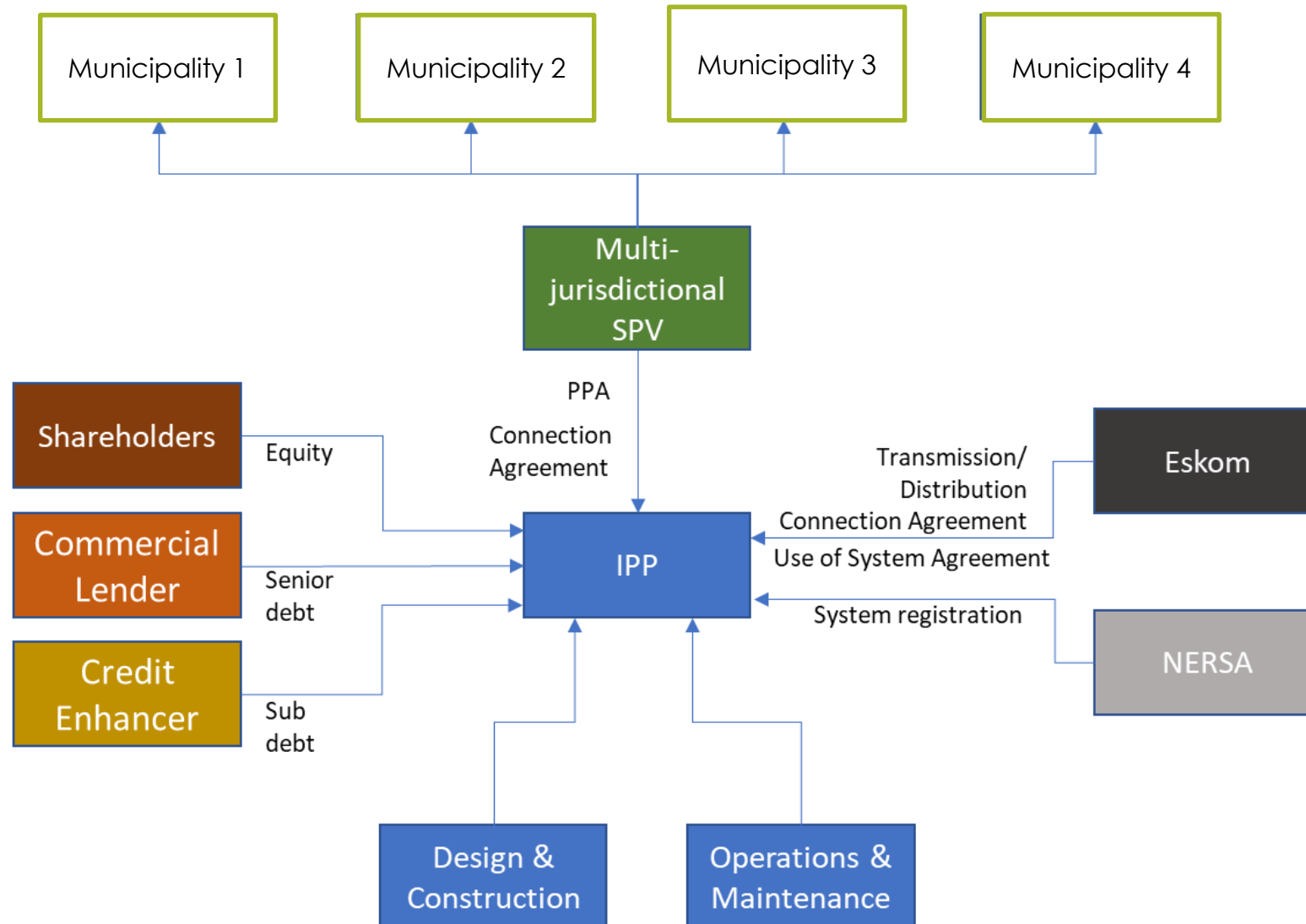
However thro' this business case

we **want to explore more out** to the MSPV in order to increase sustainability of the entity and also create value to other municipalities & WCG beyond the initial shareholders

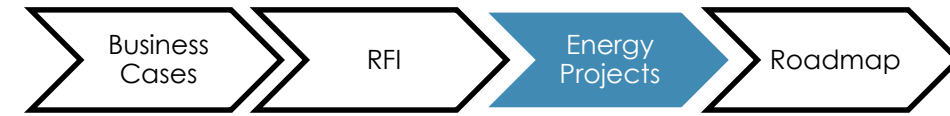
Commercial Structure: Pioneering Project #5



Recall proposed commercial structure for Pioneering Projects 5: MSPV purchases electricity from IPP



Financial Analysis: Impact on Cost of Supply



- Tool to estimate the current cost of supply and new cost of supply for each Pioneering Project

Impact on the current cost of supply	Pioneering Project 1		Pioneering Project 2	Pioneering Project 3	Pioneering Project 4	Pioneering Project 5			
	Solar PV	Wind				Drakenstein	Stellenbosch	Mossel Bay	Saldanha Bay
Candidate Municipality	Drakenstein		Stellenbosch	Mossel Bay	Saldanha Bay	Drakenstein	Stellenbosch	Mossel Bay	Saldanha Bay
Financial impact on the current cost of supply									
Current CoS (without Pioneering Project)	113.6 c/kWh	113.6 c/kWh	116.9 c/kWh	115.5 c/kWh	122.6 c/kWh	113.6 c/kWh	116.9 c/kWh	115.5 c/kWh	122.6 c/kWh
New CoS (with Pioneering Project)	105.3 c/kWh	107.9 c/kWh	108.2 c/kWh	108.7 c/kWh	116.2 c/kWh	104.6 c/kWh	106.4 c/kWh	106.5 c/kWh	116.0 c/kWh
% change from the current CoS	-7.3%	-5.0%	-7.4%	-5.9%	-5.3%	-7.9%	-8.9%	-7.9%	-5.4%

- All Pioneering Projects **decrease the current cost of supply** (decrease ranges between 5% and 9%)
- Pioneering Project 5 expected to improve CoS through increased energy yields, economies of scale (lower capex) and better funding terms. Indicative location: Droerivier (~200MW).

Pioneering projects high level results in energy projects report



Description	Project 1		Project 2	Project 3	Project 4	Project 5
Off-taker	Municipality 1		Municipality 2	Municipality 3	Municipality 4	All selected Candidate
Technology	Solar PV	Wind	Solar PV	Solar PV	Solar PV	Solar PV
Maximum capacity can procured	81 MW	54 MW	51 MW	37 MW	28 MW	198 MW
Estimate capacity largest POS	34MW	34MW	37MW	16MW	22MW	
Indicative price per MWh	603	756	626	644	615	535

Pioneering Projects #1 - #4: Legal Assessment



● Scale of the Pioneering Projects and Section 34 Determination

- No licensing requirement, only registration. Registration procedure (outdated) does not have s34 determination or Reg 5 requirements.
- If a Determination is required, this may be sought after appointment of Preferred Bidders*.

● Procurement process approvals for procurement electricity by the municipality

- Municipalities have authority to procure. Must procure in accordance with SCM Policies.
- Municipalities must have budget for procuring IPP electricity in bulk.
- Section 33 MFMA approval includes mandatory public participation process and consideration of the views expressed by public, treasury, COGTA and DMRE, among others

● Environmental approvals and land use consent

- Generation facility will require a number of environmental approvals and land use consents. These approvals are project and site specific.
- Environmental and land use approvals public participation.

● Electricity generation registration and wheeling arrangements

- Candidate Municipalities will need to submit a defensible Cost of Supply study to support the PPA costs.
- If required, wheeling through Eskom network is subject to Eskom requirements.

Pioneering Project #5: Municipal Special Purpose Vehicle (“MSPV”)



The key findings from the legal assessment include:

● Establishment of the MSPV

- Established as a municipal entity under Companies Act

● Various Approvals required by a Candidate Municipality to establish/participate in MSPV

- Section 78 MSA approval, need and desirability assessment, public consultation, the shareholding in the MSPV.

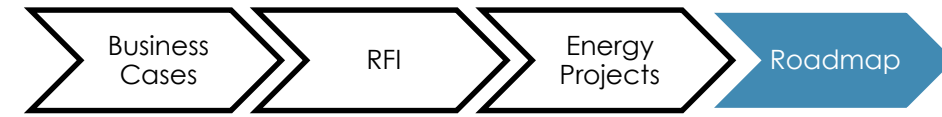
● Approvals or authorisations required by the MSPV to purchase power from an IPP and sell power to a Municipality

- Section 34 Determination & Regulation 5 of the New Gen Regulations will not apply to the MSPV

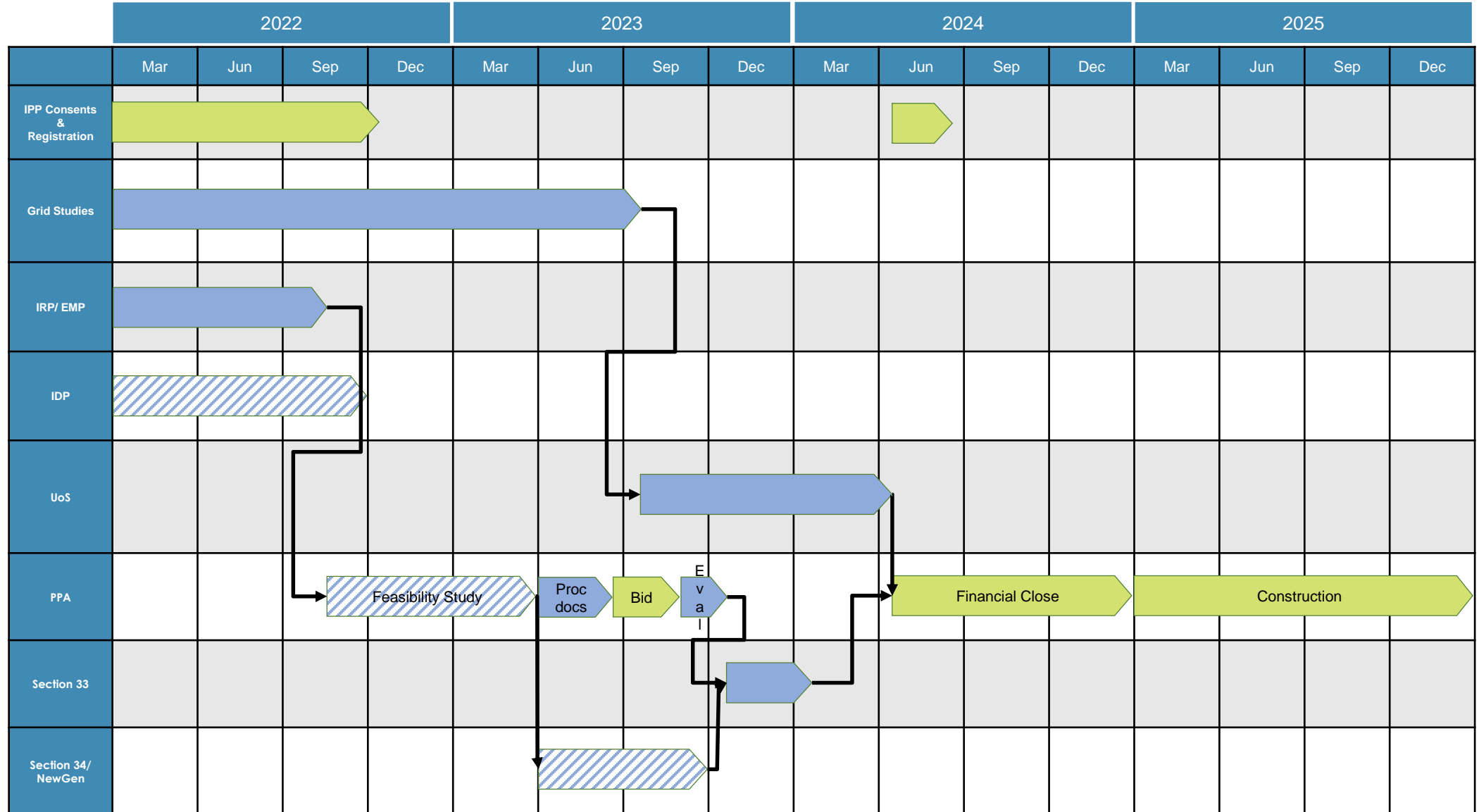
● MFMA and SCM procurement approval for electricity purchases and sales

- The MSPV will need to have and implement an SCM policy.
- No section 33 equivalent approval for the MSPV to enter into any long-term contract but the MSPV is required to obtain approval for the budget of the MSPV on an annual basis from the participating municipalities.
- Each municipality that concludes a PPA with the MSPV will need to ensure that it complies with the requirement of long-term contracts in section 33.

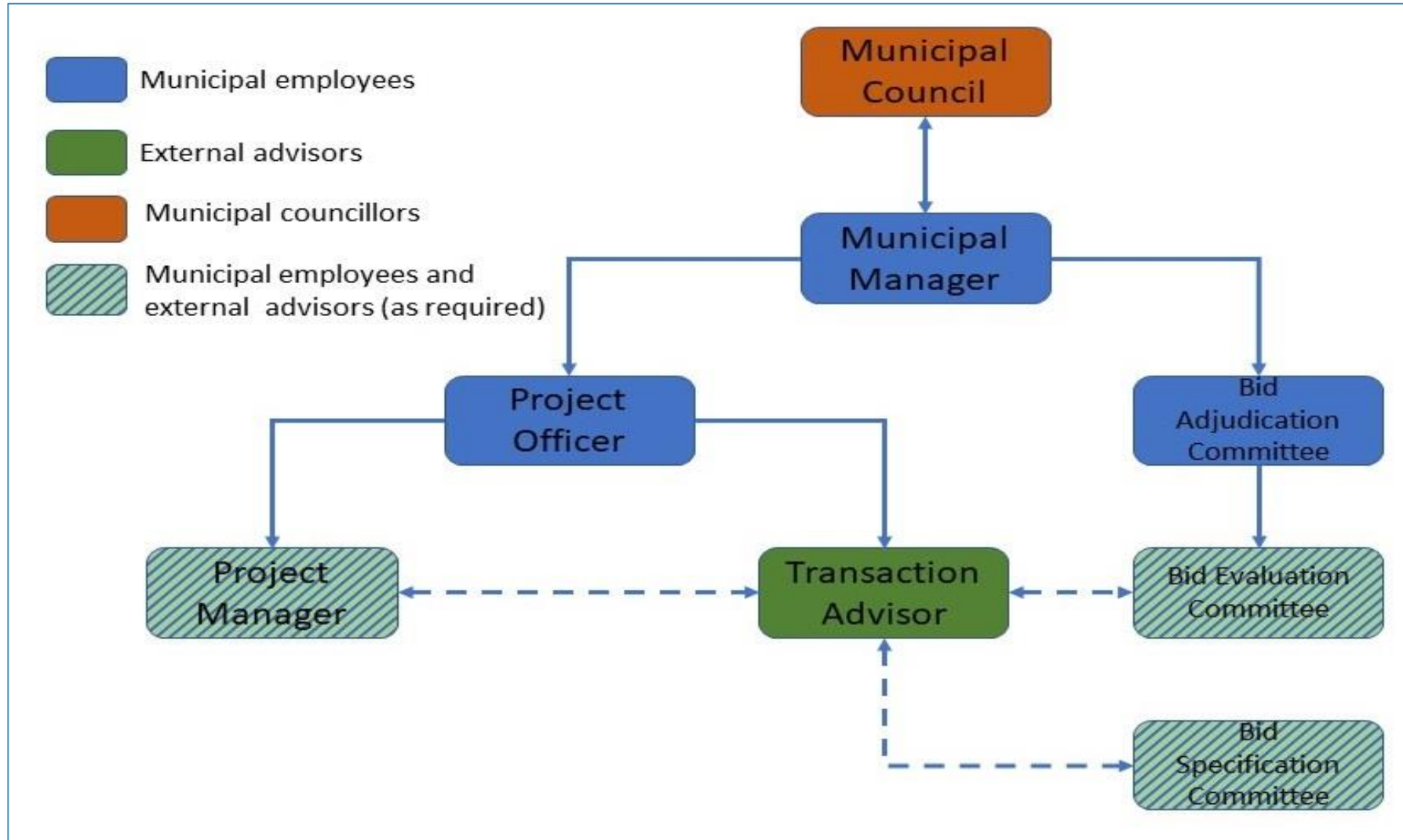
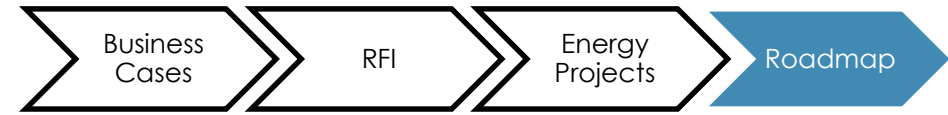
Pioneering Project Roadmap: PP 1-4



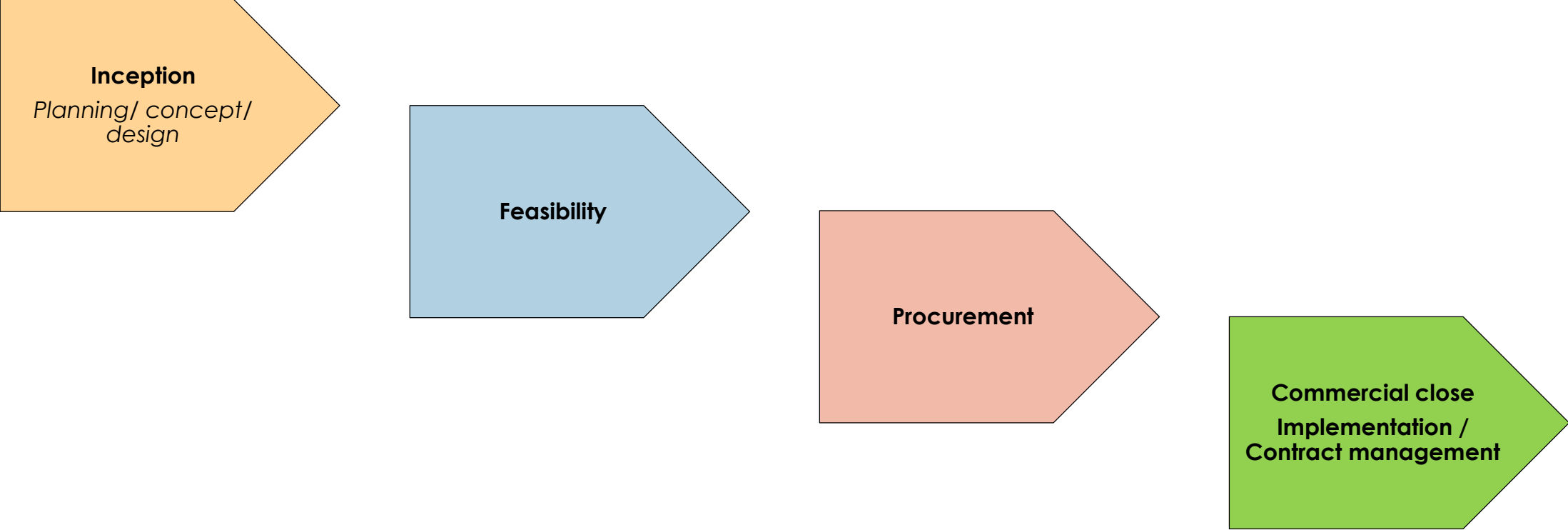
- Implementation plan summary for PP 1-4 – illustrative overview, not for project management



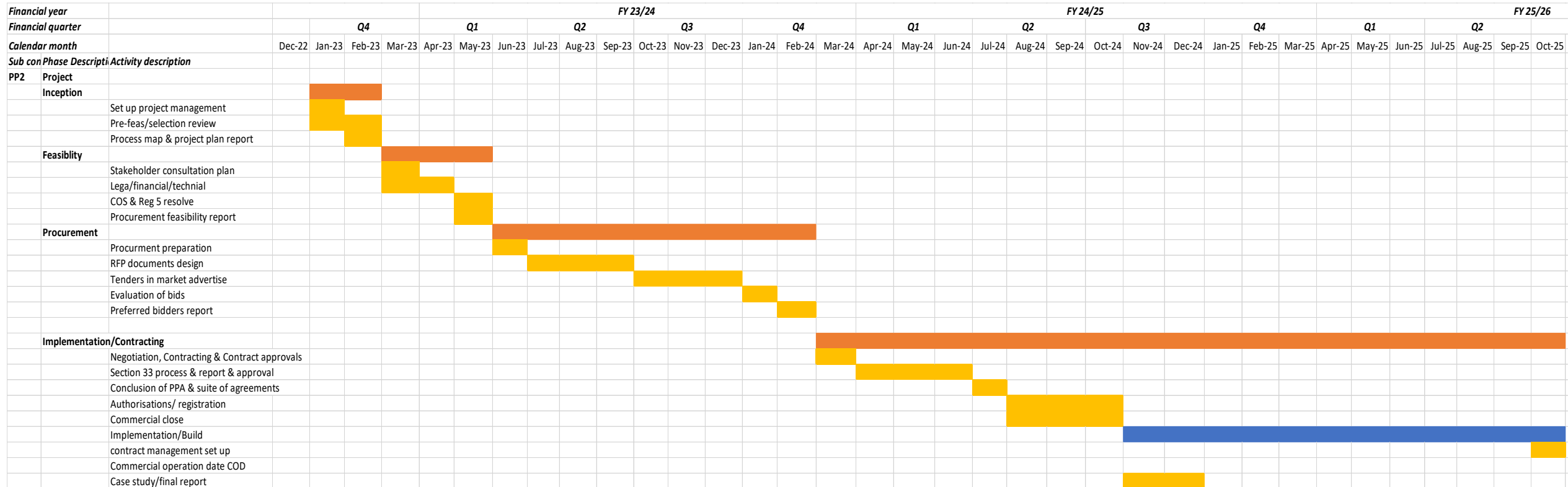
Proposed ideal municipal structure, staffing and roles



Phase 2 Implementation: MER high level pioneering project – key procurement process steps to contract IPP for new gen capacity



MER MIPPP Pioneering project 2 Gantt chart extract to illustrate



Current municipal procurement & pool-buying

Name of Project	2022/23 Project output	2022/23 Project Outcome
Municipal procurement		
Municipal Capacity Support	<ul style="list-style-type: none"> Provision of municipal capacity in Stellenbosch (&/or Drakenstein) Municipality for landing the pioneering project(s) 	<ul style="list-style-type: none"> Towards the implementation of the pioneering projects
Transaction advisory support for pioneering project(s)	<ul style="list-style-type: none"> Feasibility (to enable finalization of procurement documents/RFP and IPP programme) – for Stellenbosch Preparation of procurement process for Drakenstein 	<ul style="list-style-type: none"> Towards the implementation of a 50MW renewable energy project Towards the implementation of a 80MW renewable energy project
Transaction advisory support to City of Cape Town	Transaction advisory support to support the procurement and contracting stages of the City's IPP pioneering project	Towards the implementation of a 200MW renewable energy project
Foundational Energy Studies	Finalised cost of supply studies, electricity master plans and mini-IRPs (total 13 projects) across 8 municipalities	Enabling factor towards 500MW of lower carbon electricity produced in WC
Enabling systems		
Multi-Jurisdictional Special Purpose Vehicle(MSPV) establishment	Business case for a MSPV (to enable pooled buying of renewable energy from IPPs) incl. value proposition for pooled buying, options analysis, commercial & risk structuring & other technical aspects.	To enable a decision on whether to proceed or not with MSPV by WCG & stakeholder municipalities



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