



Project development workshop

Just Municipal Embedded Generation

4 – 5 November 2025



Welcome

1 A sector in transition: Roles for municipalities in the Just Energy Transition

2 Integrating gender equality and social inclusion in the Just Energy Transition

3 Municipal project pathways and options – Part 1

4 Learning from experience with case studies

5 Close of day

18:15 *Group dinner at La Boheme, Sea Point*

Agenda

Day 1

1 Municipal project pathways & options –
Parts 2 & 3

2 Understanding and managing project risks

3 Expectations of capital

4 Municipal project pathways and options –
Part 4

5 Way forward, reflections & feedback

6 Workshop closing & thanks

Agenda

Day 2

1

A sector in transition: Roles for municipalities in the Just Energy Transition



The municipal electricity business model

Core challenges

- Poorly maintained infrastructure
- Inefficient billing & metering systems
- Tariffs are not cost reflective
- Low revenue collection rates
- High losses technical and non-technical
- High-value customers are reducing their reliance on the municipal grid through private generation
- Rising costs: Eskom's bulk purchase tariffs continue to increase
- A rapidly evolving sector: regulation, technology, economics, actors
- **The consequences:** declining electricity revenue and a financially unsustainable electricity business model ill-equipped for an evolving sector, which will undermine municipalities to provide electricity to their residents

The fundamental shift

From stable monopoly to wholesale market

- The historic system
 - Municipalities have been the sole provider of electricity within their licensed areas
 - With a clear role of buying from Eskom and selling to customers
- The new reality
 - Municipalities are now becoming one participant among many
 - This new environment creates new opportunities, risks, and uncertainties
 - This sector in transition requires actors to adapt with new approaches and skills

Municipalities' levers

- Distribution grid
- Data
 - Customer demand profiles
 - Potential demand growth
- Customer relationships
 - Residential
 - Commercial
 - Industrial
- Land
- Municipalities need to utilise these levers in this transition, to ensure long term sustainability of their electricity businesses and electricity provision, and protect the interests of their residents in a rapidly changing market
- Municipalities with their developmental mandate are crucial custodians of the just energy transition

The path forward for municipalities

Navigating the new electricity market

Municipalities are facing the dual challenge of a crippled business model and a complex new electricity market

To be able to make strategic decisions in this context, we first need to understand:

 What the technical and regulatory forces are that are driving this change

 What the new roles and responsibilities are that municipalities must prepare to play

Our technical partners, AIA, will now guide us through these crucial details

Municipal panel

From market theory to municipal realities

The new electricity market introduces complexities, raising the critical question of where to start

The best starting point is mastering the fundamentals

- Accurately measuring electricity, billing for it correctly, and collecting revenue efficiently

These foundational building blocks enable a municipality to:

- Attract investment
- Engage confidently with IPPs
- Manage complex wheeling transactions

Now we will hear from the front lines as our municipal panel shares their on the ground experience in building these crucial foundations...

Our panelists

Understanding the fundamentals

Foundational element

Municipality

Energy master planning

Cape Agulhas Municipality

Cost of Supply

Greater Tzaneen Municipality

Tariff design

Walter Sisulu Municipality

Smart metering rollout

Matzikama Municipality

Grid maintenance and upgrades

King Sabata Dalindyebo Municipality

Wheeling frameworks

Ephraim Mogale Municipality

Plenary discussion

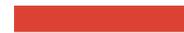
Discussion prompts

- Any reflections/questions from the panel discussion?
- What do you find most exciting and most daunting about the changing electricity sector?
- What roles do you see yourselves playing in the future?
- What are your main priorities for these two days?

Morning tea break
& group photograph

2

Integrating Gender Equality and Social Inclusion in the Just Energy Transition



Prompt:

“Using a society-first approach, and considering the context of the communities in your municipality - what does integrating an equitable, just and inclusive approach to this project look like? What are some of the key concerns and considerations relating to your customer base?”

Free Write

UK PACT

Why GEDSI Matters?



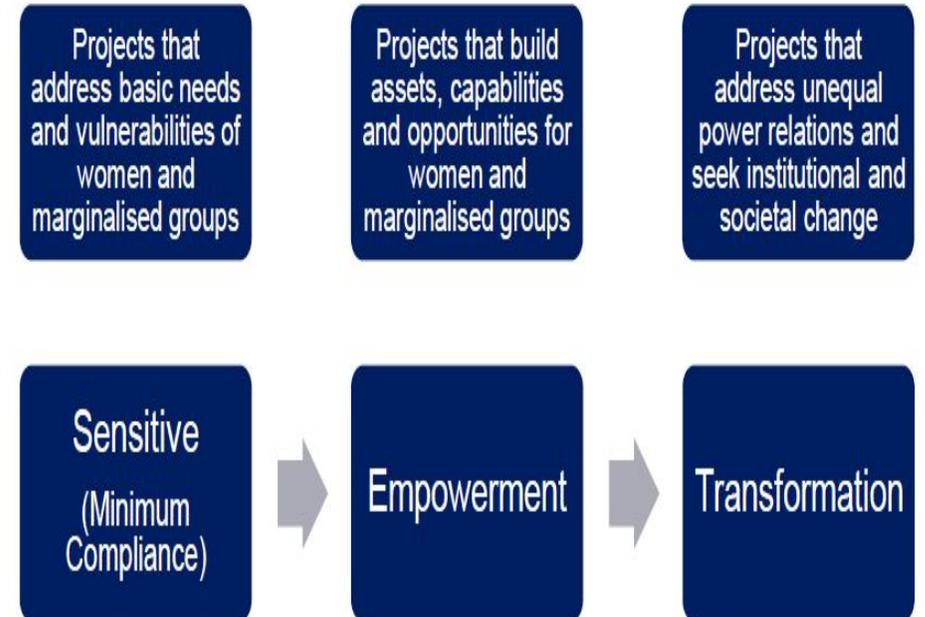
Gender Equality, Disability and Social Inclusion (GEDSI)

Overview of concepts - What do we mean by GEDSI?

- **Gender equality:** The absence of discrimination based on gender in opportunities, the allocation of resources or benefits, and access to services. It is the full and equal exercise by people of all gender identities of their human rights.
- **Disability:** The interaction between persons with impairments and various barriers that hinders their full and effective participation in society on an equal basis with others. Disability inclusion seeks to tackle the systemic discrimination, stigma, and exclusion that people with disabilities face in many aspects of their lives, including in access to the information and resources needed to adapt to climate change.
- **Social inclusion:** The removal of institutional barriers and the enhancement of incentives to increase access for diverse individuals and groups to development opportunities. These barriers may be formal (i.e., policies and legislation) or informal (i.e., customs and behaviours).
- **Do No Harm:** Understanding and addressing the possible negative impacts of interventions on the lives of all persons and aiming at minimum, and at all times, to cause no harm to anyone through our actions.

How to measure GEDSI ambition of projects

Figure 1 The levels of GESI mainstreaming



GEDSI in South Africa's Just (Energy) Transition Context

3 Principles of the Just Transition

Procedural Justice

- Focuses on an inclusive process
- Recognises marginalised groups (i.e. women/youth/disabled/elderly/indigent communities/informal settlement dwellers) by including them in decision making processes; and enabling/empowering broad stakeholder engagement
- Workers, communities, and small businesses define their own development paths
- *"Nothing about us, without us."*



GEDSI in South Africa's Just (Energy) Transition Context

3 Principles of the Just Transition

Distributive Justice

- Fair sharing of risks, costs, and benefits
- Aims to address a “double inequality” around responsibilities (who pays?) and impacts (who benefits? And how?)
- Emphasizes the need to clearly show how benefits and burdens are shared (e.g., where jobs are gained or lost, and the quality of those jobs).
- Targeted skills and economic opportunity creation for affected groups (including women, youth, persons with disabilities, and low-income communities), to participate in transition projects and programmes
- Local empowerment, strengthening provincial and municipal capacity through resources, skills, and institutions, to drive local economic development.



GEDSI in South Africa's Just (Energy) Transition Context

3 Principles of the Just Transition

Restorative Justice

- Considers past, present and future damages that have occurred against individuals, communities and the environment
- Provides opportunities to rectify or reform the situations of harmed or disenfranchised communities (which is the reality of many communities in SA)
- Moving away from resource-intensive, fossil fuel sectors toward models that restore ecosystems, improve energy security, eliminate energy poverty, and create green jobs
- Building a more decentralised, net-zero economy that increases community participation and ownership and ensures meaningful redress.



Achieving a just transition for South Africa

A just transition aims to achieve a quality life for all South Africans, in the context of increasing the ability to adapt to the adverse impacts of climate, fostering climate resilience, and reaching net-zero greenhouse gas emissions by 2050, in line with best available science.

A just transition contributes to the goals of decent work for all, social inclusion, and the eradication of poverty.

Just Transition Framework:
Presidential Climate Commission, 2022

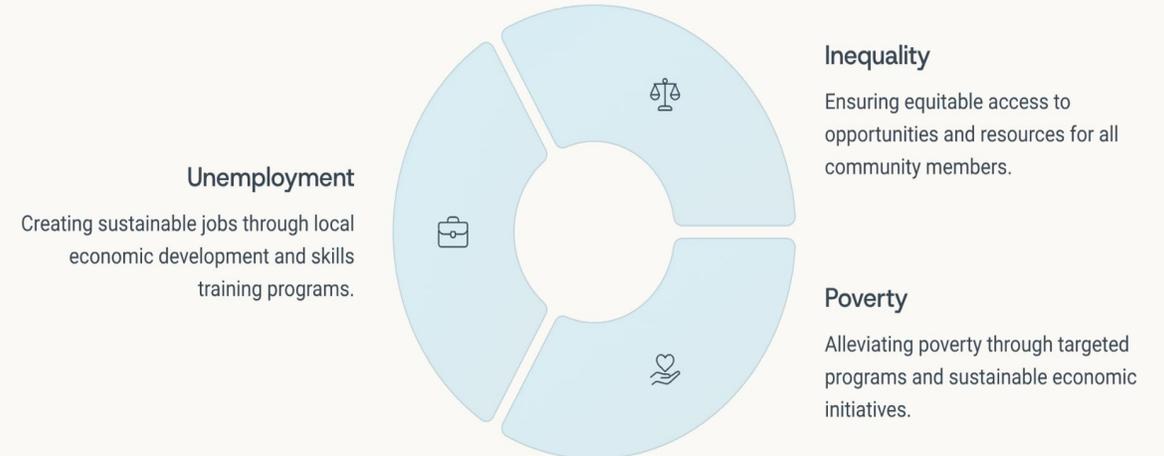
GEDSI Principles in Municipal Development

Exploring key themes from Integrated Development Plans and Local Economic Development strategies that drive inclusive growth and social transformation

- The National Development Plan (NDP) 2030 issued in 2012 set out a long term vision for the country and provides the programme through which South Africa can advance radical economic transformation through development planning.
- NDP 2030 serves as the national development planning vision for the improvement of the quality of life of our people.
- The diagram below indicates the three NDP Pillars, through which the MTSF 2019-2024 aims to address the challenges of unemployment, inequality and poverty



Three NDP Pillars



Municipalities' Overarching Key Performance Areas

1

Local Economic Development

- Promote economic growth and development (EPWP)
- Create enabling environment for business
- Boost tourism in municipal areas

2

Infrastructure & Basic Service Delivery

- Equitable, affordable & sustainable services
- Quality infrastructure maintenance
- Community facilities and services

3

Social and Youth Development

- Safe and healthy environment
- Youth empowerment programs
- Community cohesion initiatives

Social Equity

Priority Groups

Youth, women, people with disabilities, previously disadvantaged persons, gender equity

Social Development

Youth development, social well-being, recreational needs, education access, safe environment

Community Access

Accessible services, equitable affordable services, quality basic services for all households

Participatory Governance

Community involvement, effective communication, people-centered delivery, stakeholder consultations

The Business Case: Why GEDSI Matters for the Just Energy Transition

1. Advancing human rights

Climate impacts are unevenly felt. Due to existing inequalities and power imbalances, women and other marginalised groups face disproportionate effects on health, education, livelihoods, and safety.

2. Fulfilling commitments

Integrating GEDSI supports South Africa's obligations under the Paris Agreement, CEDAW, and the SDGs (1, 5, 7, and 10). It also aligns with municipal IDPs and LED strategies.

3. Strengthening project design

Recognising the needs and capacities of women and excluded groups leads to more inclusive, sustainable interventions. Early GEDSI engagement builds trust, strengthens community ownership, and supports long-term success.

4. Preventing harm

Projects that overlook GEDSI risk exclusion, social conflict, and maladaptive outcomes. Mainstreaming GEDSI helps avoid these risks and ensures fair benefits.

5. Strengthening business value

Projects that meaningfully engage women, youth, people with disabilities, informal traders, and other vulnerable groups build social licence and reduce project risk. Funders increasingly prioritise GEDSI-responsive projects, improving bankability and access to finance (for example, DBSA's PPF & EGIP GEDSI criteria). Using a gender lens also drives women's economic empowerment and improved just transition outcomes.



KEY TAKEAWAY:

Failing to integrate GEDSI introduces financial, political, and reputational risks. Conversely, embedding GEDSI principles in municipal energy projects strengthens community benefits, aligns with IDPs, unlocks diverse funding opportunities, and de-risks implementation—making it essential for a truly *just* transition

Understanding Key GEDSI Risks in Energy Projects

Exploring how renewable energy projects can inadvertently deepen inequality and harm vulnerable communities and what we must consider to ensure equitable outcomes.

The Challenge of Exacerbating Inequality

- **Limited Access to Benefits**

Women and marginalized communities face barriers to financial resources, skills training, and networks needed to engage in renewable energy, widening socio-economic gaps.

- **Exclusion from Decision-Making**

Women and socially excluded groups lack representation in energy policy, resulting in solutions that fail to address their specific needs.

- **Energy Access Disparities**

Electrification prioritises urban centres and big businesses, leaving informal settlements and low-income communities without reliable, affordable energy access.

Who Gets Left Behind?

Informal settlement dwellers, low-income communities, and those in informal businesses risk being excluded, perpetuating cycles of poverty and limiting economic empowerment.

Understanding Key GEDSI Risks in Energy Projects

Resource Allocation and Equity Concerns

The Hidden Cost of Energy Projects

- Large renewable energy projects may divert municipal funds away from essential public services like water, sanitation, and healthcare intended for low-income communities.
- This reallocation perpetuates unequal service delivery and deepens socio-economic inequalities, unfairly burdening vulnerable populations.

Adverse Impact on Livelihoods

Informal Businesses at Risk

Informal local businesses, often operated by women, experience disruptions due to:

- Restricted access during construction
- Displacement from project sites
- Reduced customer flow

These impacts lead to income loss and entrench existing gendered economic vulnerabilities.

Resource Competition

Large projects strain water resources, potentially affecting women in agricultural activities. Reduced availability for irrigation and household use impacts care labour and informal businesses.

Disruption of Traditional Practices

Infrastructure can occupy agricultural land or disrupt ecosystems that communities rely on for subsistence farming and traditional crafts, disproportionately affecting women and indigenous peoples.

Land-Related Concerns

Land Grabs and Disempowerment

Large projects can lead to land dispossession without fair compensation, disproportionately impacting women and indigenous communities who face barriers to land ownership and legal recourse.

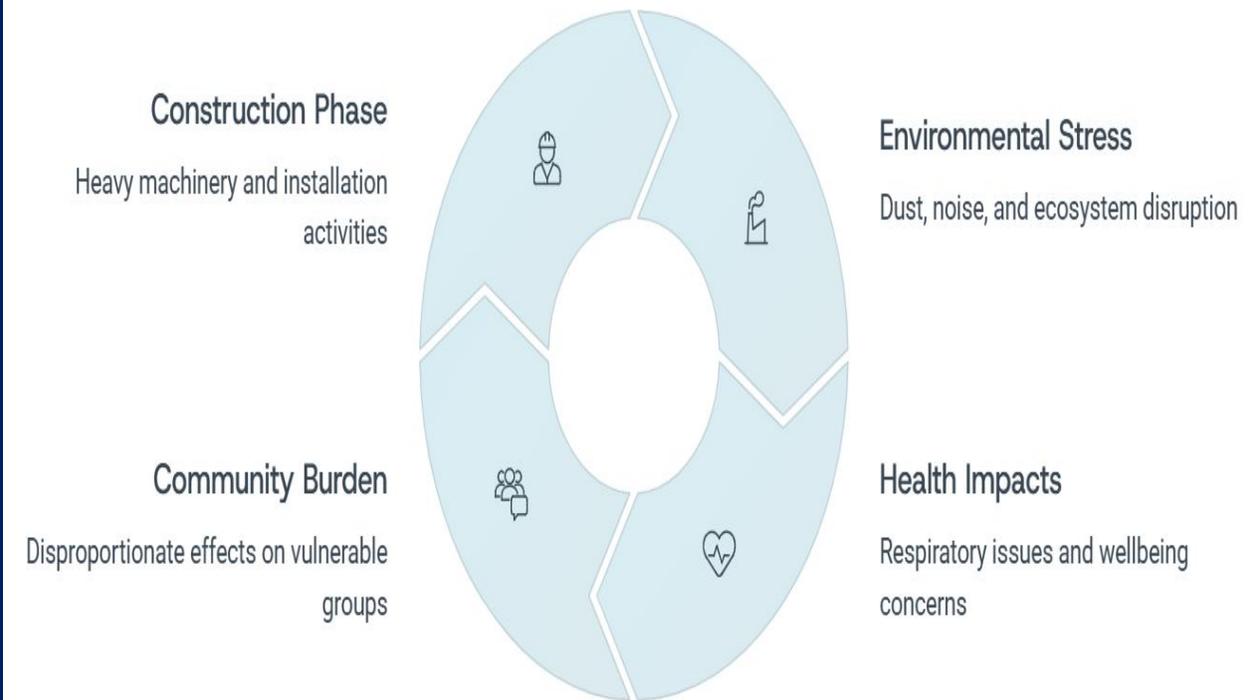
Land Rights Disputes

Women, indigenous peoples, and socially excluded groups are often excluded from land ownership discussions. Limited legal standing heightens vulnerability to abuse during resettlement.

Health, Safety, and Environmental Harm

- Large renewable energy projects can pose significant health, safety, and environmental risks during construction and installation phases.
- Increased dust, noise, and traffic from heavy machinery can negatively affect the health and wellbeing of nearby residents, particularly women, children, and the elderly who often spend more time at home.
- The influx of construction workers can also heighten safety risks for women and girls, including exposure to gender-based violence and harassment.

Environmental Harm and Community Impact



Mitigating Risks and GEDSI-blind municipal energy projects

Issue/Risk to be mitigated	Key GEDSI-sensitive questions, activities, measures & considerations	Examples of baseline data to be collected and verification indicators
<p>Electricity use & service delivery</p>	<p>How is electricity used and by whom (e.g., households, SMMEs, basic public services) and for what (e.g., water and sanitation, cooking, heating, lighting, communication, health services, education)</p> <p>Identify instruments and mechanisms to minimise power shortages and outages and improve service delivery to poor, indigent households and low-income communities, prioritising services such as health clinics and schools, pumped water, and street lighting.</p> <p><i>*this will help decide where new embedded generation electricity is channeled to in a way that is inclusive and equitable.</i></p>	<ul style="list-style-type: none"> ● Use of electricity (hours) for productive vs. reproductive purposes in households and businesses ● Reduced power outages ● Increased and improved service delivery to poor and low-income households and basic services relevant to women and children
<p>Affordability</p>	<p>Is electricity affordable, particularly to poor households and those headed by women?</p> <p>What are the viable options to improve affordability for poor and female-headed households with new EG?</p> <p>Ensure affordability through:</p> <ul style="list-style-type: none"> - free/ subsidised or affordable credit for up-front household connections costs for low-income communities and indigent households; - tariff levels to improve affordability and reflect indigent women's income levels; and - inform and consult indigent/poor women about affordability issues. 	<ul style="list-style-type: none"> ● Cost of connection and services vs. household incomes ● Poverty among female-headed households ● No. of poor households subsidised (or credit provided) for connection (no. or % of poor households headed by women among them can also be monitored)

Mitigating Risks and GEDSI-blind municipal energy projects

Issue/Risk to be mitigated	Key GEDSI-sensitive questions, activities, measures & considerations	Examples of baseline data to be collected and verification indicators
Employment Opportunities (construction and/or in O&M)	<p>What kinds of jobs would be created and how accessible would these be to men, women, youth etc.</p> <p>Can the project offer jobs for women (e.g., construction labor, project management staff)?</p> <p>Include women in project construction activities and set targets for women’s employment, where possible</p> <p>Do energy-based enterprises or SMMEs exist in the project area? Can women start such enterprises or be employed by them?</p>	<ul style="list-style-type: none"> ● No. of energy enterprises (% owned by women) ● Percentage of women among employees (if possible by level) ● No. of jobs (person-days) generated for women by the project (and percentage of total jobs generated) by the project construction work. ● No. of women receiving technical and skills development training provided to women (and percentage of total)
Environment, health, and safety	<ul style="list-style-type: none"> - Are women’s mobility and safety constrained due to poor electrification in areas (e.g., unavailability of streetlights due to unreliable electricity supply)? - Are poorer/ vulnerable populations more likely to be affected by noise or air pollution with development? - Will development displace economic activities or exclude vulnerable groups from natural resources? - Is earmarked land used as a travel shortcut or crime hotspot for women (that redevelopment could reduce instances of GBV)? 	<ul style="list-style-type: none"> ● Data on gender-based violence incidents ● Respiratory infection prevalence rates ● Streetlight functionality data ● Safety perception surveys

Mitigating Risks and GEDSI-blind municipal energy projects

Issue/Risk to be mitigated	Key GEDSI-sensitive questions, activities, measures & considerations	Examples of baseline data to be collected and verification indicators
New energy technology	In the introduction of new energy technology (i.e Solar PV) , what are the preferences, opportunities, and constraints by women and men as users?	<ul style="list-style-type: none"> ● Community preferences and constraints by gender ● Level of technology adoption disaggregated by gender
Customer Satisfaction	<p>Why It Matters?</p> <p><i>Municipalities depend on customer retention. Women manage household electricity, making their feedback crucial.</i></p> <p>Key questions:</p> <ul style="list-style-type: none"> - Are customers pleased with the current services and access? - Are women consumers asked about service satisfaction, given their important role as household electricity managers? - Does a customer feedback system exist (e.g., customer service desk, citizen’s report card)? - Can women customers be targeted as providers of regular feedback to improve services? 	<ul style="list-style-type: none"> ● Customer survey results data (gender disaggregation) ● Consumer satisfaction with the electricity services pertaining to adequacy of supply, prices charged, and tariff levels (ratings disaggregated by gender).

Best Practice: Atlantis GMPV Case Study

A best practice example of community-centered renewable energy development through strategic stakeholder engagement and local empowerment

Project Overview

Community Liaison Officer

Locally and democratically voted representative ensuring open communication between project and community.

Local SMMEs Appointed

Strategic focus on local businesses from Atlantis

Job Creation

Significant local employment opportunities created through comprehensive headcount planning.

Procurement Packages

Multiple contractor opportunities with transparent bidding processes and community oversight.



Key Takeaways

Lesedi-Technoserve Consortium Approach

Key drivers of change:

- LTC developed a comprehensive stakeholder engagement and communications plan to ensure project success through collaboration.
- Initial Town Hall Meetings- Partnered with Sub Council to provide project overview and establish effective community engagement frameworks.
- Public community engagements:
 - 43 attendees at Atlantis MPC Hall to introduce the project to targeted business forums and local vendors identified. Attendees learned about SMME opportunities, procurement processes, and employment pathways.
 - 72 community members attended broader introduction, including project website launch for ongoing communication.
 - Open platform for RFQs, RFPs, and continuous dialogue beyond CLO interface.
- SMME Development Program:
 - Partnership with Atlantis Special Economic Zone developed a collaborative program to build business capacity,
 - Provided 3-Month Training (prioritising women- and youth-led businesses)
 - Resulted in 15 SMMEs empowered, where participants gained skills to develop funding-ready business cases and proposals.

Community Concerns Addressed

Key Questions Raised

- What tangible economic benefits will local residents see?
- How will employment opportunities be distributed?
- What business opportunities exist for local owners?
- How can we ensure opportunities stay within Atlantis?

Project Response

Maintained open communication channels, transparent procurement processes, and comprehensive engagement sessions with expert representation to address all concerns.

Community Development Facilitator with local experience ensured effective dialogue and trust-building.

Social Engagement as Core Strategy

Communication Excellence



Regular Updates

Media releases and progress emails kept community informed about site developments and milestones.



Education Campaign

Extensive work explaining solar PV technology and grid integration, managing expectations transparently. Provided solar training and ensured community awareness of benefits and opportunities.

Governance and Inclusivity

"A municipality must develop a culture of municipal governance with a system of participatory governance, and must encourage and create conditions for the local community to participate in the affairs of the municipality."

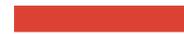
— Municipal Systems Act 32 of 2000 (ss 16)

- Procurement experts, project managers, and BBBE specialists present at all sessions.
- Integral collaboration with Subcouncil and local leaders
- Pushed for women's participation despite male-dominated local business landscape.

Lunch

3

Municipal project pathways & options: Part 1



Municipal project pathways & options – Part 1

Pathway options:

- Municipality is a long-term offtaker to an Independent Power Producer (IPP)
- Municipality owns and balance-sheet funds a solar PV plant
- Municipality owns and debt-finances a solar PV plant
- Municipality enters into a public-private partnership for a solar PV plant
- Municipality enables wheeling through its grid

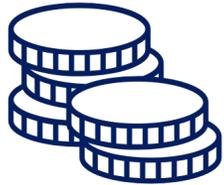
Municipality is a long-term offtaker to an Independent Power Producer (IPP)

Requirements and implications

- Municipality commits to procuring electricity from an Independent Power Producer (IPP) usually through a 20 year PPA.
- **Benefits:** Debt is not recorded on the municipality's balance sheet, no municipal capital requirements, no operational priorities.
- **Risks:** The private sector holds ownership, limited municipal control, reliance on private sector for critical infrastructure.
- **Needs & requirements:**
 - A long-term PPA requires compliance with MFMA Section 33 and SCM legislation and must be transparently procured through a competitive RfP process.
 - Municipal capacity requirements
 - Municipal offtake ability
 - Mechanisms for enhancing creditworthiness

Municipality is a long-term offtaker to an Independent Power Producer (IPP)

Drivers



Cost savings

- Reduces need to purchase electricity from Eskom at increasing tariffs, leading to long-term savings, *although this depends on the PPA and tariff*



Customer retention

- By using IPP power procurement to ensure a more reliable and stable power supply, municipalities can encourage customers to remain connected to the municipal grid.



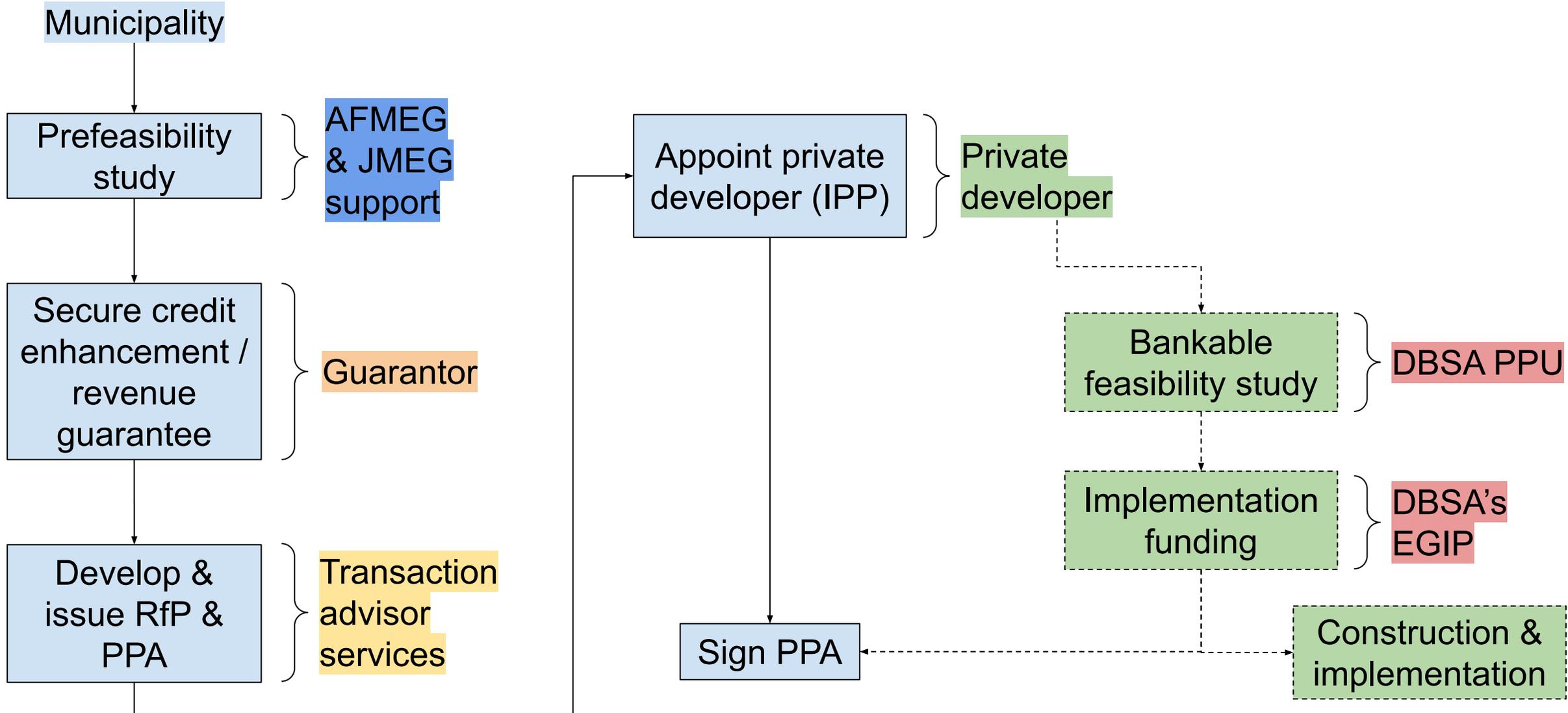
Energy security

- Provides a new/ alternative source of electricity.
- Reduces dependence on Eskom, mitigates risks associated with national grid outages.

Environmental sustainability: reduction of greenhouse gas emissions & air pollution

Municipality is a long-term offtaker to an Independent Power Producer (IPP)

Implementation pathway



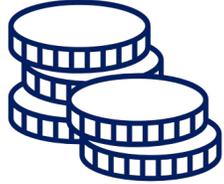
Municipality fully owns and funds a solar PV plant

Requirements and implications

- Municipality fully finances a renewable energy facility using internal reserves, concessional debt, or a blended structure.
- Operation and maintenance (O&M) can be contracted out.
- **Benefits:** Full control over project design, implementation, operation and tariff.
- **Risks:** Full financial exposure (municipality bears all project risk, including cost overruns, downtime, and underperformance); project competes with other funding priorities.
- **Needs & requirements:** Significant upfront investment, technical expertise, regulatory compliance, management and operational capacity, performance monitoring.

Municipality fully owns and funds a solar PV plant

Drivers



Cost savings

- Reduces need to purchase electricity from Eskom at increasing tariffs, leading to long-term savings.
- Over time, the LCOE from RE plants is often lower than Eskom's tariffs.



Customer retention

- By generating electricity locally, municipalities can ensure a more reliable and stable power supply, which may encourage customers to remain connected to the municipal grid.



Energy security

- Provides a reliable and localised source of electricity.
- Reduces dependence on Eskom, mitigates risks associated with national grid outages.
- Can postpone or reduce grid expansions by generating power closer to the point of consumption.

Environmental sustainability: reduction of greenhouse gas emissions & air pollution

Municipality fully owns and funds a solar PV plant

Financing options

Balance sheet finance

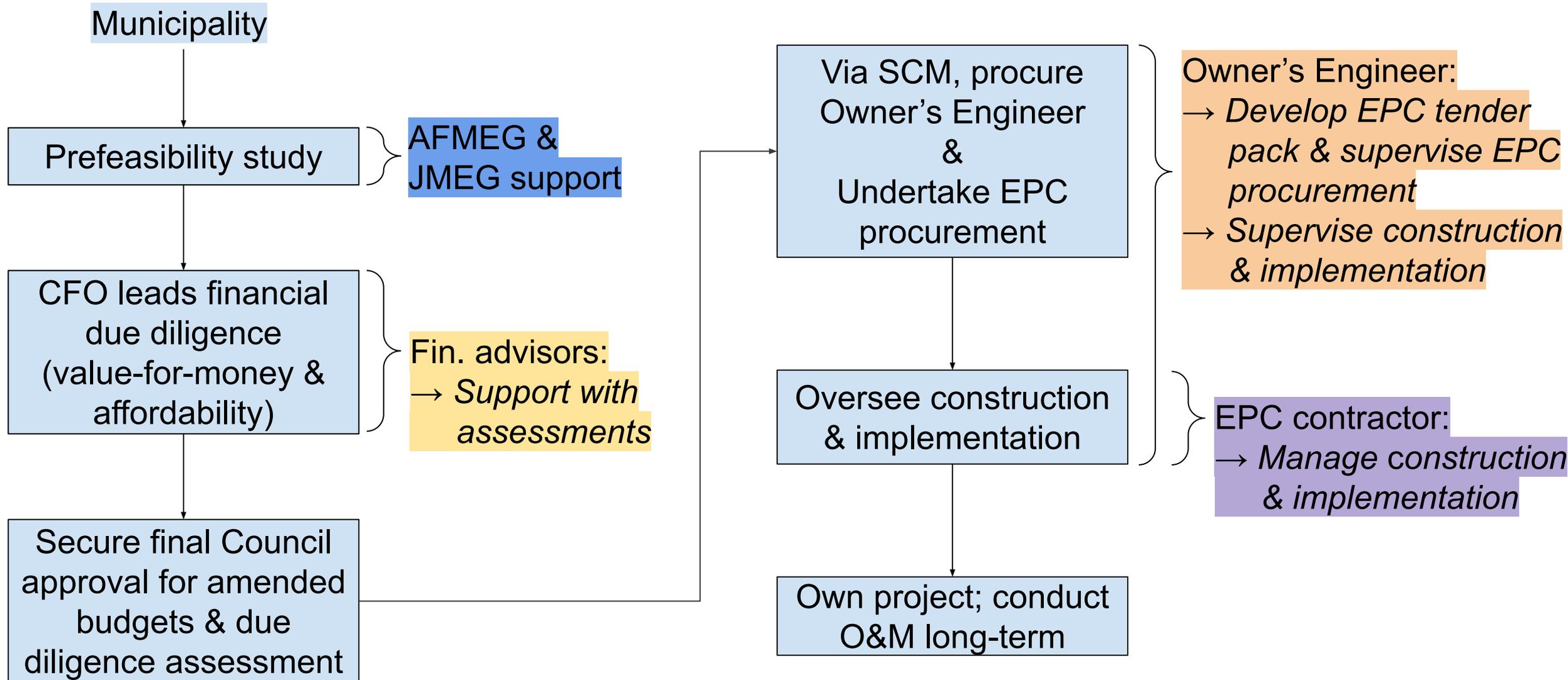
- Funded on the balance sheet through the capital budget/ MIG
- Key considerations:
 - Cash flow and reserves of municipality

Debt finance

- Debt appears on balance sheet
- Financial institutions offer debt based on municipal credit.
- Key considerations:
 - Ability of municipality to take on debt
 - Potential to access concessional finance through EGIP
 - Potential to access project preparation support from the DBSA (co-finance bankable feasibility study)

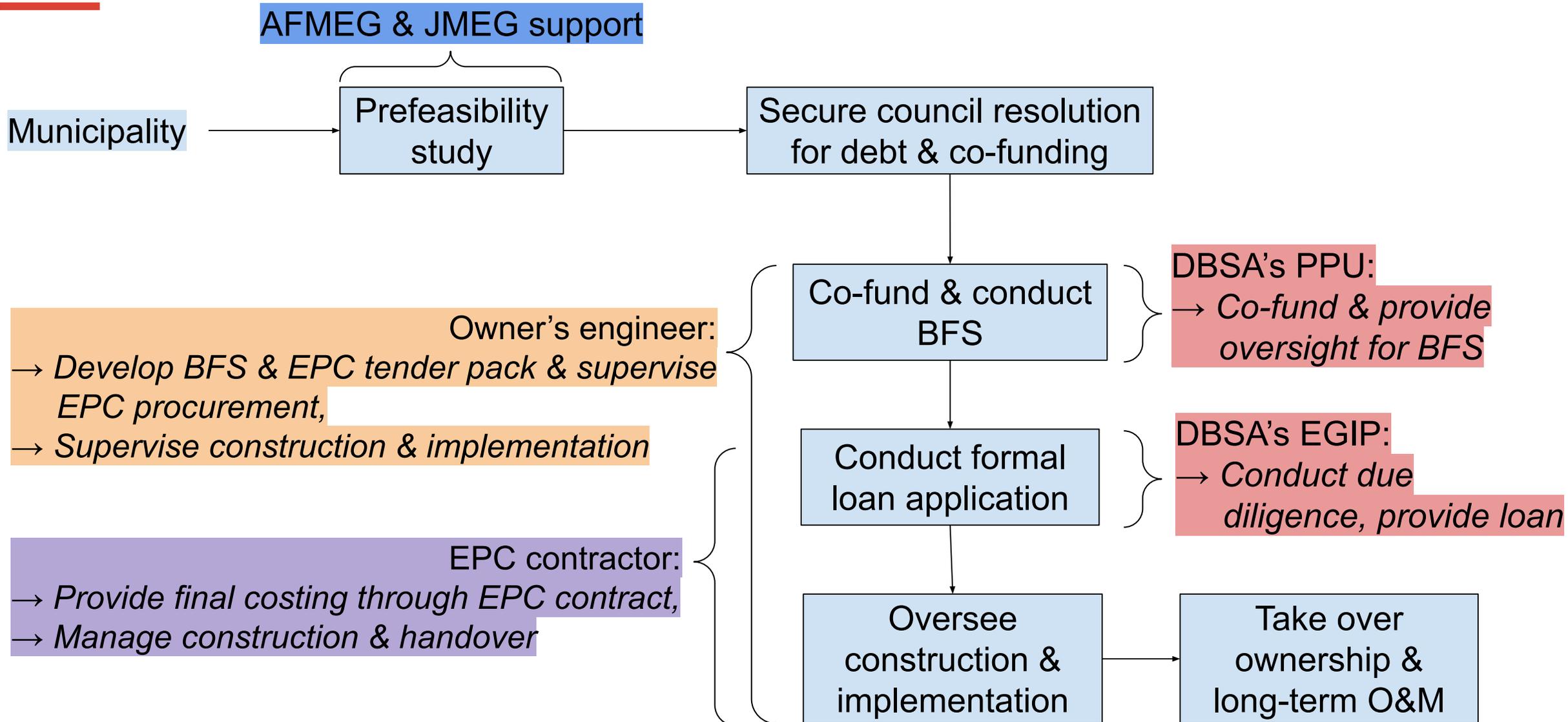
Municipality fully owns and funds a solar PV plant *from its balance sheet*

Implementation pathway

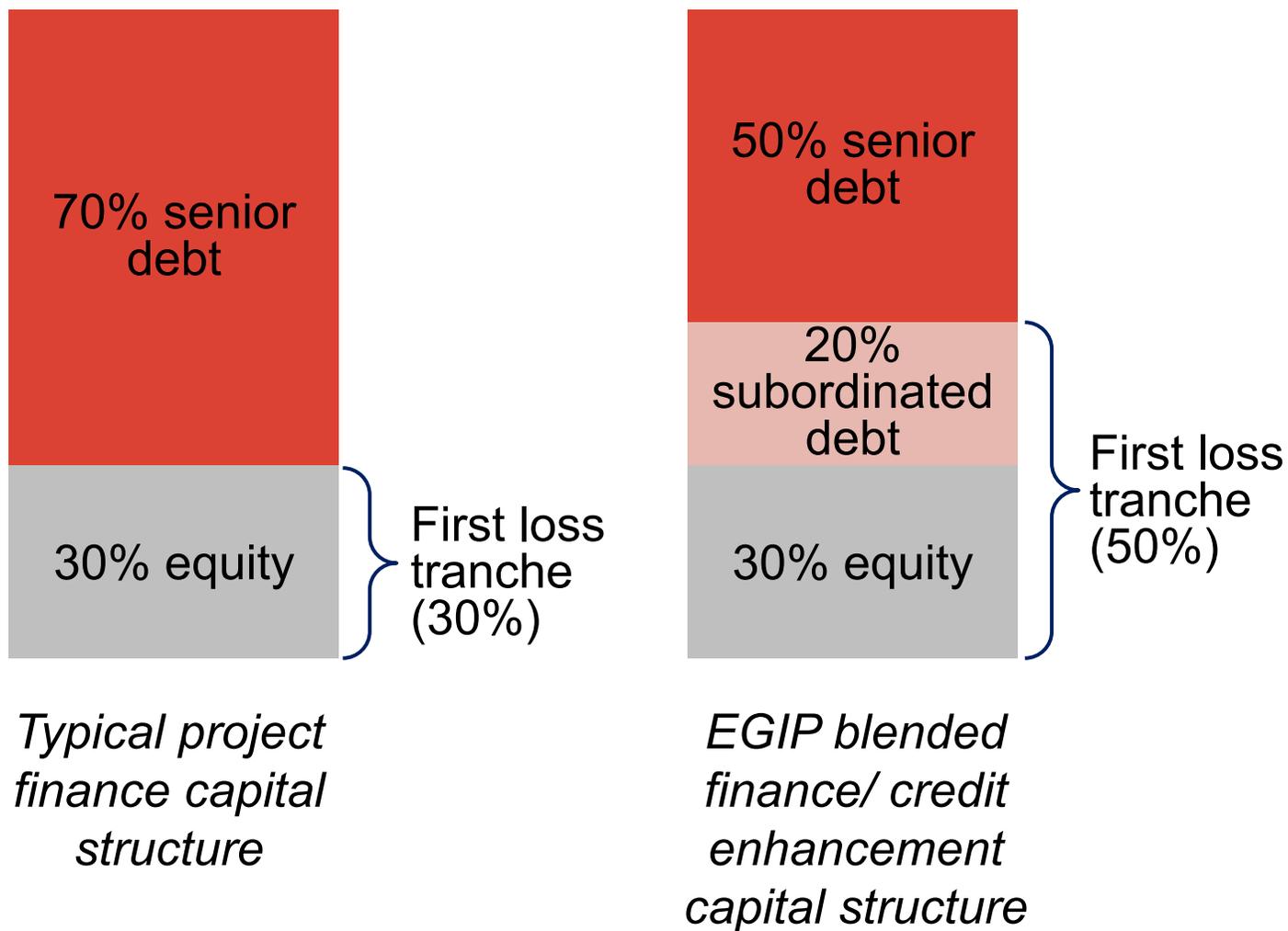


Municipality fully owns and funds a solar PV plant *using debt finance*

Implementation pathway



Blended finance (first loss mechanism)



DBSA's EGIP

Embedded
Generation
Investment
Programme

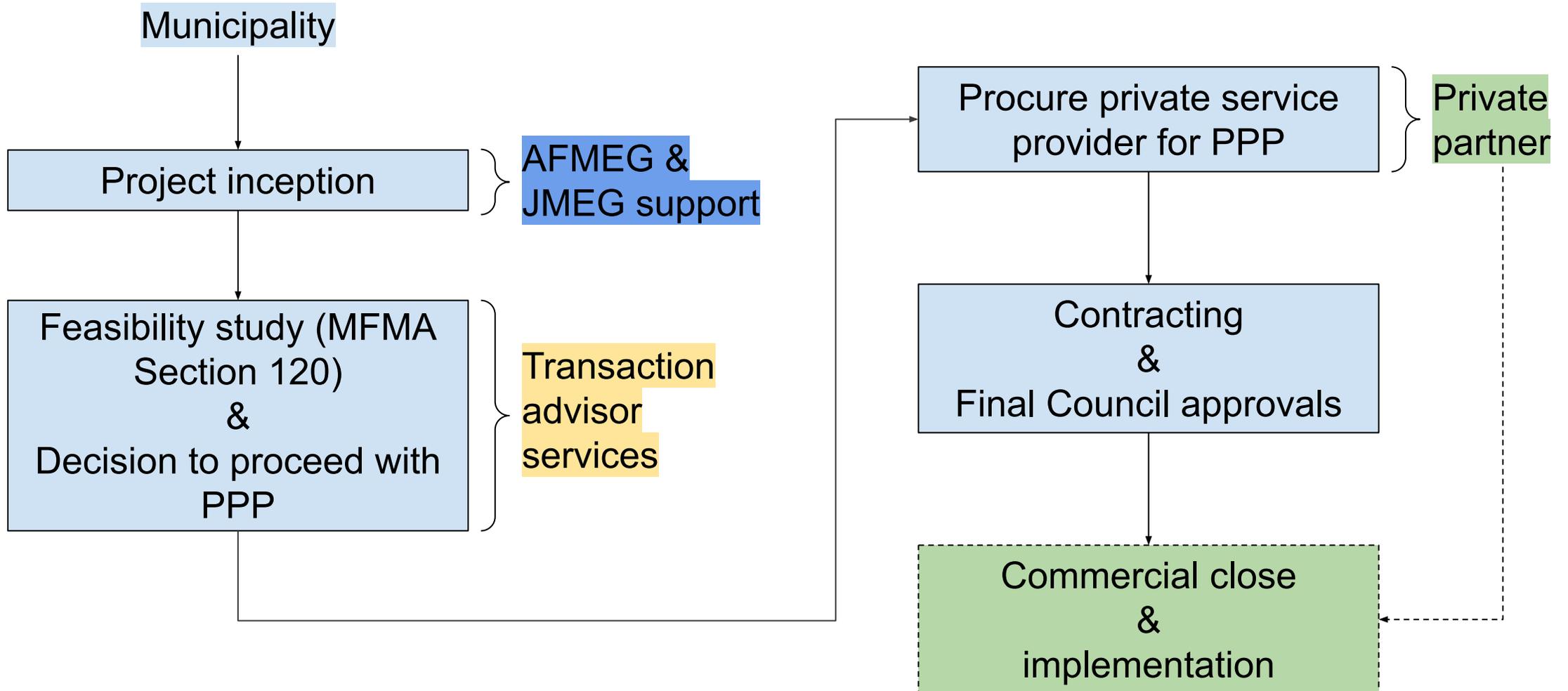
Municipality enters into a public-private partnership for a solar PV plant

Requirements and implications

- **Benefits:**
 - Limited upfront capital requirement
 - Risk transfer to private sector
 - Leverages financial and operational capacity of private sector
- **Risks:**
 - Complex, resource-intensive & lengthy procurement process
 - Long-term nature of contracts
- **Needs & requirements:**
 - Strong internal capacity for process & contract management
 - Procurement process – competitive and transparent bidding process (& Treasury V&R)
 - Needs and feasibility assessment – justify use of PPP, prepare feasibility study (value for money, technical viability, etc.);
 - MFMA – Section 120 (& Section 33)
- Minimum project investment volume (ticket size) for the PPP process to be viable and worthwhile
 - Linked to solar PV plant capacity & size

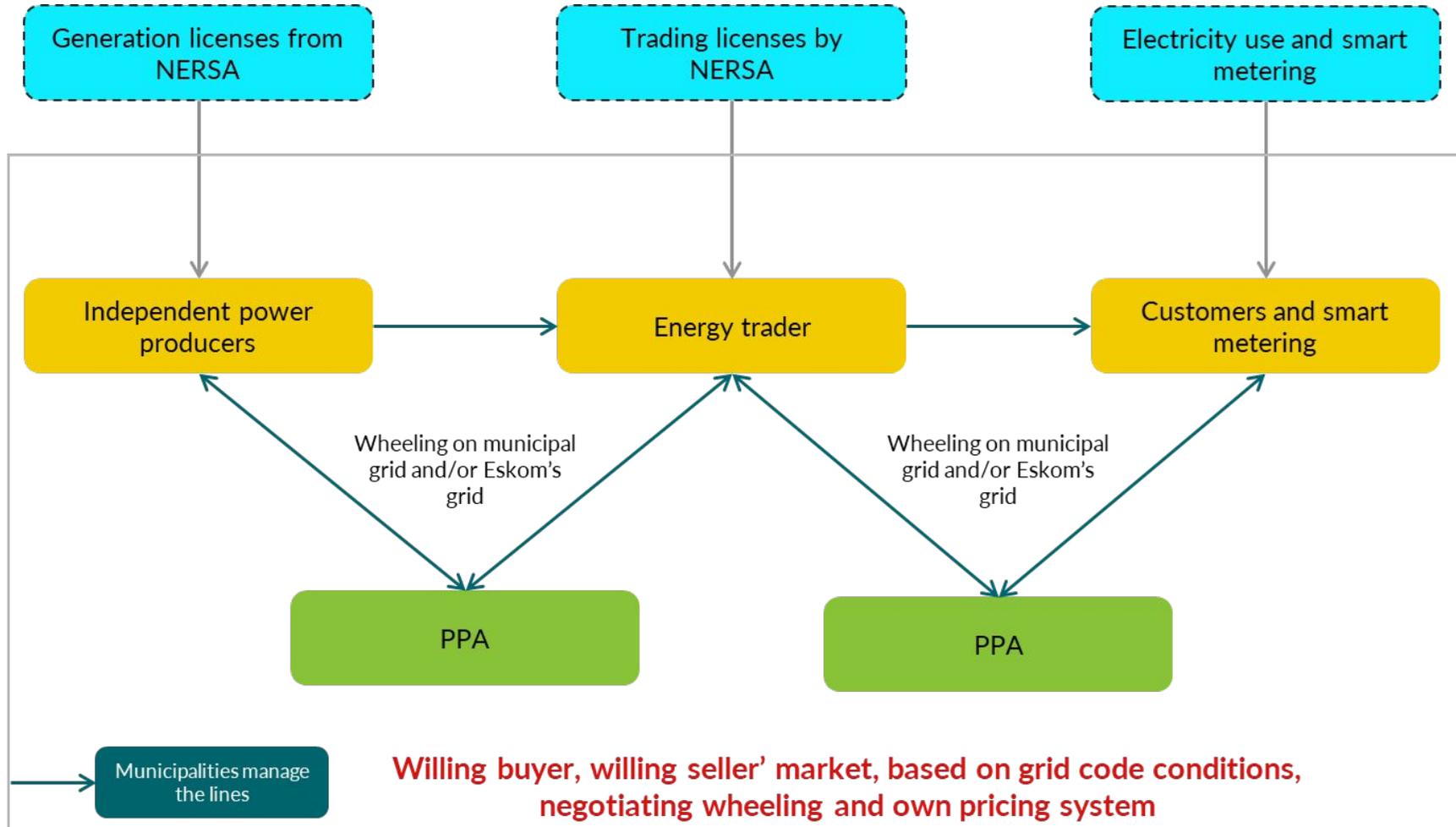
Municipality enters into a public-private partnership for a solar PV plant

Implementation pathway (simplified)



Municipality enables wheeling through its grid

Understanding wheeling



Wheeling is a financial transaction that involves the delivery of electrical energy over an existing transmission or distribution network

In a third-party wheeling arrangement, a generator sells its generated electricity to another party (the off-taker) through the network of a licensed NSP/DSO

Municipality enables wheeling through its grid

Understanding wheeling

- 1 Conduct and inception workshop
- 2 Develop the wheeling service guidelines and process
- 3 Council approve wheeling as a service (if applicable)
- 4 Public participation
- 5 Submit wheeling tariff to NERSA
- 6 Tariff approved as part of budget process
- 7 Approved wheeling policy and wheeling tariff
- 8 Customer Wheeling agreement
- 9 Prepare/ Upgrade billing system
- 10 Pilot Project
- 11 Open Wheeling market

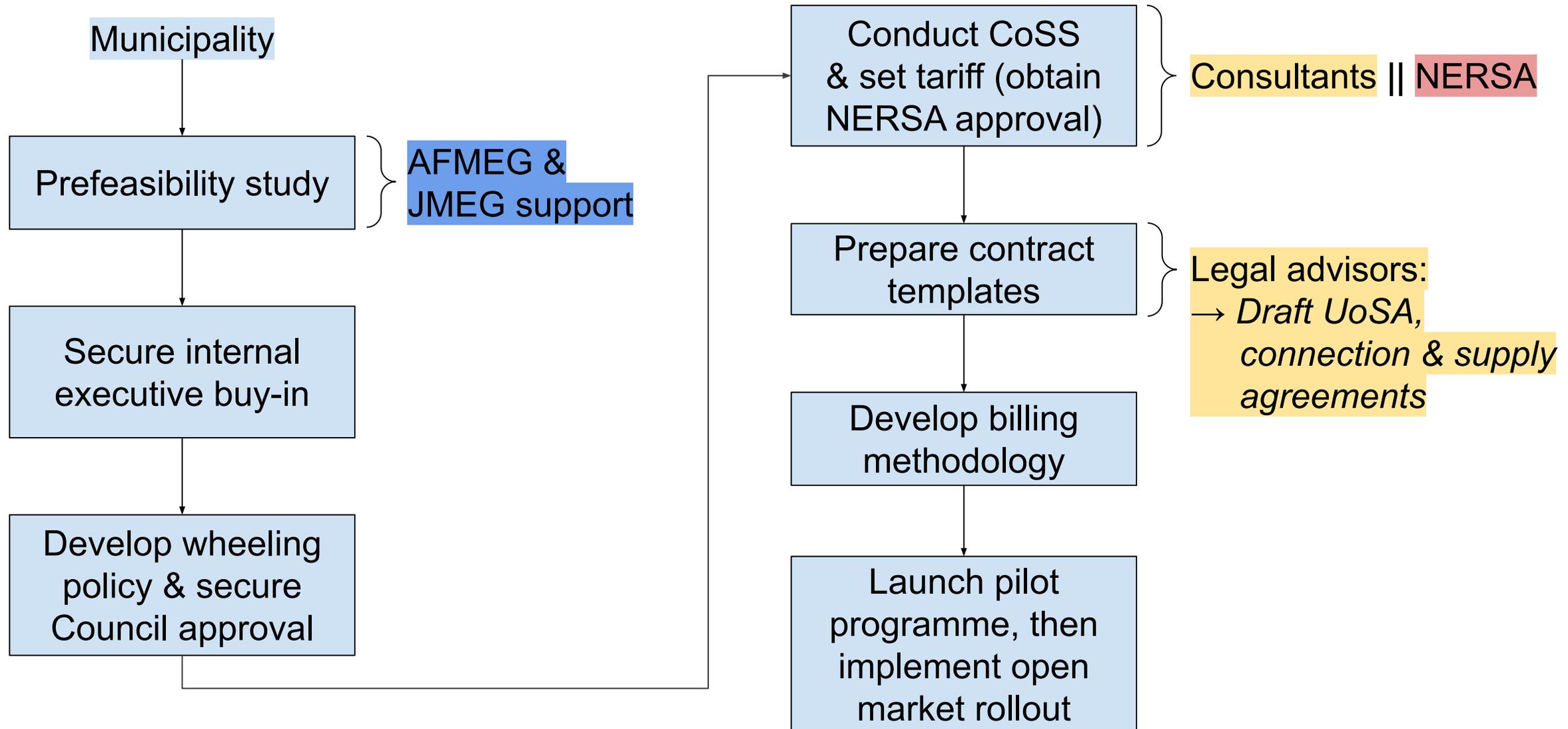
Potential revenue options for municipalities through wheeling

NERSA wheeling framework

- **Use-of-System Charges:** Municipalities can impose distribution UoS charges for energy wheeling through their networks. These charges are designed to recover costs associated with network usage, including fixed, capital, O&M costs, distribution losses, and ancillary services
- **Contribution to Subsidies and Surcharges:** Municipalities can impose council-approved surcharges and require all network users to contribute to NERSA-approved subsidy-related charges. This ensures that municipalities can recover costs and maintain financial sustainability
- **Connection Charges:** Generators and loads connected to municipal networks are required to pay connection charges. These charges contribute to the upfront costs of connecting generation facilities and strengthening the network infrastructure
- **Electricity Supply Agreements:** Municipalities can amend existing Electricity Supply Agreements with off-takers to reflect wheeling charges and credits. This ensures that municipalities can account for wheeled energy and recover associated costs
- **Impact Assessments:** Municipalities are required to estimate and quantify the impact of wheeling on their revenue, considering factors such as energy consumption, load profiles, and tariff structures. This allows municipalities to assess and address potential revenue changes due to wheeling transactions
- **Capacity Upgrades:** Municipalities may require funding for network upgrades to accommodate wheeling transactions. Affected parties may be informed of options to fund these upgrades, such as deep connection charges, which could provide additional revenue streams

Municipality enables wheeling through its grid

Implementation pathway



4

Learning from
experience with
case studies

Case study presentations

Presenter

Case study

Deon Louw

Stellenbosch Municipality IPP Procurement Programme

Marlyn Hendricks

City of Cape Town Atlantis plant

Afternoon tea break

5

Close of day



Project development workshop – Day 2

Just Municipal Embedded Generation

4 – 5 November 2025

1 Municipal project pathways & options –
Part 2 & 3

2 Understanding and managing project risks

3 Expectations of capital

4 Municipal project pathways and options –
Part 4

5 Way forward, reflections & feedback

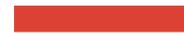
6 Workshop closing & thanks

Agenda

Day 2

1

Municipal project
pathways &
options:
Parts 2 & 3



Municipal project pathways & options – Part 2

- **Consolidating the work done so far** (acknowledging different starting points) and updates to municipal situation
 - MM, KSD, WS: additional data, site and technology assessment, grid impact assessment, transaction structure
 - CA, EM, GT: Data collection, site selection, technology assessment, transaction structure
- **Today take stock** (in small groups & plenary)
 - Discuss priority options, implications & implementation pathways
 - Identify key questions & gaps
 - Decide on option so that work can progress
- **Next steps** (immediate & a longer term trajectory)
 - Sequence & interdependencies
 - Timeframes

Municipal project pathways & options – Part 2

- A profile slide deck has been developed for each municipality, with
 - Technical overview
 - Financial and governance overview
 - Opportunities and concerns, including those identified in previous discussions
 - Estimated solar PV plant specifications
 - Pathway options for the municipality, with rationale

- For your municipality, consider:
 - The pathway options presented
 - The rationale thereof
 - Your preferred option, or alternative thoughts
 - Way forward

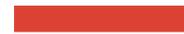
Municipal project pathways & options – Part 3

- Plenary discussion
- Deepen understanding of the pathways and address questions, assumptions and concerns
 - Offtaker to IPP
 - Own-build, balance sheet financed
 - Own-build, debt financed
 - Wheeling

Morning tea break

2

Understanding and managing project risks



Understanding Risk in Municipal Energy Projects

Why identifying and sharing risk matters for stronger projects

This session will help you see how creating an enabling environment by identifying, sharing, and mitigating risks improves your project's success and funding readiness.

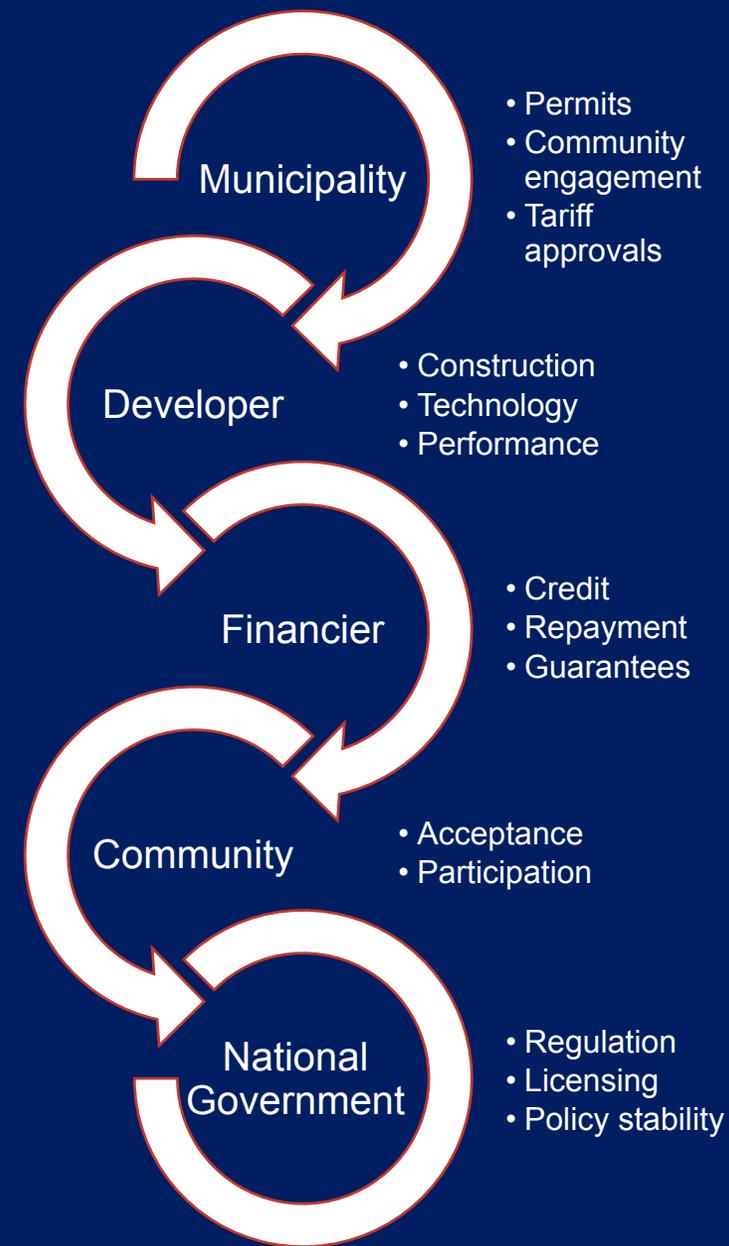
- Municipalities face growing pressure to deliver reliable, affordable energy, which comes with new risks and ways of mitigating them
- Understanding these risks helps you plan better, negotiate, and attract investment.
- Different stakeholder groups use different risk languages, but all trying to reduce uncertainty that could affect project outcomes - cost, time, performance, or public perception.
- Managing risk \neq removing risk; it means knowing who's best placed to manage it.



Shared Responsibility

- No one entity can remove all risk
- Each party manages what it controls best
e.g. *financiers manage financial risk, developers handle technical risk, municipalities manage social and political risk*
- Shifting risk doesn't mean avoiding it, it means finding the best home for it
- The goal of any project structure is to balance risk amongst all parties

Negotiation is key to ensure all risks are borne fairly between stakeholders. To do this, each party needs clarity on how each risk impacts the other.



Why risk identification matters

- Early risk identification avoids costly surprises.
- Better risk data improves negotiation power and credibility.
- Financiers **price risk**, so unidentified risks = higher interest rates or rejected projects.
- They also look for predictability - the more we show risks are understood and planned for, the more bankable the project becomes

Shifting risks based on the structure selected

- Who carries which risk depends on how the deal is structured. Affects cost, control, and investor appetite.
- When the structure changes (Own-build/IPP/Wheeling), risk moves - but doesn't disappear

Typical risk categories

Financial

- Tariff, payment, creditworthiness

Technical

- Grid capacity, equipment, O&M

Political /Institutional

- Leadership turnover, council

Social

- Community acceptance, benefit expectations.

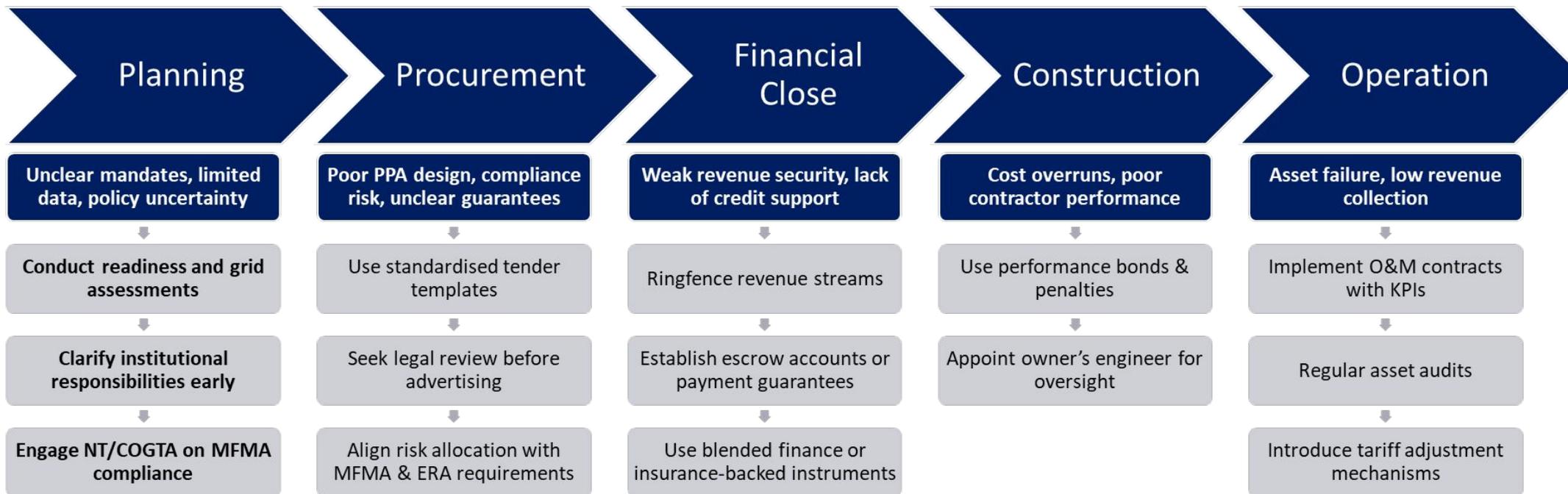
Environmental /Legal

- Permits, compliance.

Cross-cutting

- Guarantees, coordination

How risks show up across the project Lifecycle



Mitigating Risks

- Mitigation is about making risks manageable and transparent
- Most powerful mitigation happens in 3 ways: through planning, procurement design and contract negotiation. *Often what development financiers support using grant finance*
- The earlier the mitigation, the cheaper and more effective it is
- Mitigation can involve:
 - Avoiding the risk (change design, location, or approach).
 - Reducing it (use better data, experts, or technology).
 - Transferring it (insurance, guarantees, or performance contracts).
 - Sharing it (joint ownership, blended finance, risk guarantees).

How mitigation translates into your financial models

Financier Concern	What Mitigation Shows	Result
Payment default risk	Municipality has escrow or ring-fenced revenue	Lower perceived credit risk
Tariff uncertainty	NERSA approval in progress and cost-reflective study completed	Predictable cashflows
Grid reliability	Pre-feasibility grid study done	Reduced technical risk
Political turnover	Council resolution / MOU ensuring continuity	Project stability
Contract enforceability	Clear PPA with performance and step-in clauses	Legal confidence

Risk Mapping Exercise

1. Each group uses a Risk Mapping Sheet
 - a. Fill in municipal name
 - b. Fill in identified structure
2. Tick who bears the risk, assess municipal control, and suggest mitigation.
3. Discuss who bears each risk, and whether the municipality can manage it.
4. Identify one mitigation measure or support needed for each risk.
5. Choose one person to present your top risk and how you'd mitigate it.

30 minutes for discussion, followed by group reports.

**Breakout into
municipal
groups**

Guiding question for discussion

Which risks stay with you regardless of structure?

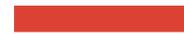
Which ones shift when you move from own-build to IPP?

What would make financiers more comfortable with these risks?

Where could national or provincial support reduce your exposure?



What we heard
from you



What this exercise shows

There's no one-size-fits-all risk allocation. What matters is recognising which risks you can control, which you can share, and which you can only influence.

Examples:

1. Control: community engagement, council approvals.
2. Share: grid connection, financing conditions.
3. Influence: tariff policy, national regulations.

Some risks can't be solved by the municipality alone (technical support and policy assistance)



GEDSI Deep Dive

- Key risks municipalities can control are the social and political risks, because of the role you play in delivering services to residents - including vulnerable groups (women/ youth/ disabled/ indigent)
- Think about who benefits and who's at risk under each model, examples:
 - What is the reality of energy access in your jurisdiction?
 - Is there an opportunity to include community ownership in the structure selected and how do you negotiate that when building your project?
 - What information are you already collecting on most vulnerable communities and how can that be used.
- Discuss potential JMEG project impacts on these groups
- Who from each of your municipalities would be responsible for these aspects of a project and how do you include them?

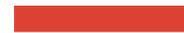


If you could address one risk immediately in your municipality what would it be, and what support would make the biggest difference?

Lunch

3

Expectations of
capital



Why capital is key for municipal energy projects



Municipalities are no longer just service providers, they're counterparties to private capital.



Every energy project involves investors, banks, and regulators assessing municipal credibility.



This session unpacks what those actors look for and why, whether you're developing generation or enabling wheeling

Do I trust the data, documents and people behind it?

Can this municipality deliver and honour its obligations

Is this project structured so I get paid?

Transaction Advisor's Lens

Can I allocate risk clearly, ensure compliance, and make both sides comfortable?

What typically goes wrong:

- **Feasibility reports are too generic:** no investor can price risk from vague data.
- **PPP routes misunderstood:** municipalities issue tenders without MFMA alignment.
- **Unclear project ownership:** municipal departments don't agree who leads (energy vs finance).
- **Negotiation fatigue:** technical, legal, and financial teams arrive at the table uncoordinated.

Advice from transaction advisors:

- Use a **single consolidated project team** – one voice in negotiations. (internal alignment is key)
- Clarify **decision-making authority** before talks start.
- Prepare a balanced **risk matrix** that shows who carries which risk and how it's mitigated.
- Never enter negotiations without a **clear understanding of your walkaway point** — financiers always know theirs.
- Keep structures fit for purpose – tailor agreements
- Be transparent e.g. show recovery plan for weak financials

Help municipalities understand what they should know before entering deals and how to manage multi-party negotiations

The Financiers Lens – How Capital Evaluates Projects

Credit Committees assess projects and ability to finance

Common deal-breakers:

- No defined revenue source
- Audit disclaimers / negative cash position
- Weak risk allocation
- Political risk – projects derailed after elections or council changes.
- Regulatory uncertainty – e.g. MFMA or Section 33 not cleared (unclear procurement routes is a major legal risk)

Advice from financiers:

- Secure council resolutions **before** investor engagement. Look into multi-year council resolutions.
- Stable project management units are a strong signal
- Establish **ring-fenced revenue accounts** or escrow mechanisms.
- Don't inflate load forecasts or tariff escalations – financiers will rerun your model.
- **Show your governance**, not just your ambition — minutes, resolutions, sign-offs matter more than PowerPoints

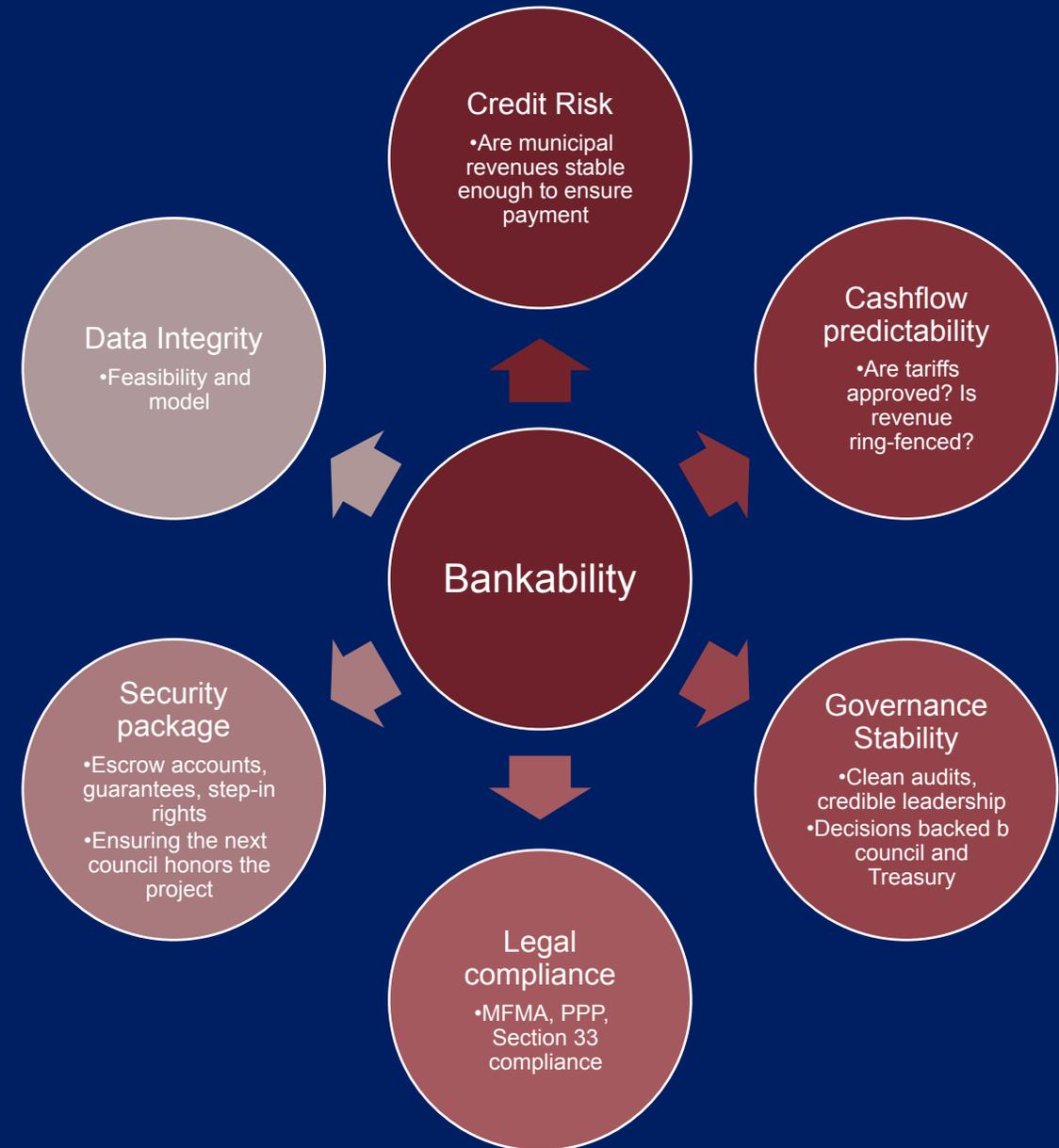
Testing repayment risk, revenue certainty, and political reliability.

Attracting investment

- Don't treat private capital like a donor – they're risk partners
- Ensure tariff setting process is transparent and defensible
- Run a transparent and predictable process

Examples of good engagement

1. Early informal consultations before issuing RFPs
2. Sharing draft financial model assumptions for feedback
3. Structuring smaller, modular projects that can be financed faster



Lessons from deals

- Projects succeed where municipalities had pre-agreed roles and transparent governance.
- Early regulatory engagement with Treasury and NERSA is key to ensure alignment.
- Understanding the unique role municipalities can play to enable investment, including having the **data and experience to integrate public priorities into investor requirements.**
e.g. translating social outcomes into quantifiable project benefits (jobs, savings, emissions avoided)

Common project blockers

Legal/ policy misalignment between national and local

Lack of technical capacity to engage external parties

Council delays in approving term sheets

Disputes between legal and technical teams

Lack of clarity on who represents the municipality

Introducing new conditions late in the process

Some hurdles you can face on this journey

Where it Failed	Why It Happened	Lesson
Section 33 approvals delayed 2 years	Council turnover, unclear accountability	Secure approvals early, engage Treasury continuously
Bid awarded, financier withdraws	Tariff not cost-reflective, too low to cover O&M	Base tariff on real LCOE and inflation data; run sensitivity tests
Bid evaluation delayed by 9 months	Procurement challenge from bidders	Pre-approve evaluation team & scoring matrix, ensure legal compliance
Project paused post-election	No cross-party buy-in	Formalise council resolution before election cycle/ secure multi-year council resolution
Developer walked away mid-negotiation	Municipality kept changing terms	Stick to initial risk allocation once published

Documentation investors expect to see

Document / Approval	Purpose	Why It Matters to Capital
Feasibility Report	Confirms technical & economic viability	Reduces uncertainty
Financial Model	Defines revenue, costs, returns	Determines IRR and bankability
Council Resolution	Authorises commitment	Proves institutional support
Section 33 / Treasury Approval	Legal compliance	Ensures transaction validity
Draft PPA / Term Sheet	Commercial structure	Clarifies payment and risk allocation
Risk Register	Identifies and mitigates key risks	Builds confidence in governance
Environmental & Land Approvals	Legal prerequisites	Avoids future project delays

Using your feasibility studies and models

Staying in the room

Get your house in order early: internal buy-in, council resolutions, and regulatory steps must precede investor outreach.

Think like a counterparty, not a client, financiers aren't service providers; they're risk partners.

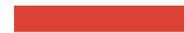
Smaller, well-prepared projects close faster than large, underdeveloped ones.

Consistent documentation, keep organized data rooms to easily pull on key information.

Investors fund teams, not spreadsheets, be ready to explain your city's plan and how you'll deliver.

4

Municipal project pathways and options: Part 4



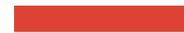
Municipal project pathways & options – Part 4

- Continue municipality group discussions
- Address key questions and considerations relating to your municipality's pathway options, particularly the preferred option

Afternoon tea break

5

Way forward,
reflections &
feedback

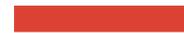


Way forward & next steps

- November 2025 - March 2026
 - Selecting transaction structure
 - Finalising technical work
 - Finalising transaction structure
 - Financial modelling (March 2026)
- Feb - April 2026 workshops
- Regulatory requirements (April-May 2026)
- Project applications to DBSA or other (July 2026)
- Project application submissions (Q3 2026)
- Project end (December 2026)

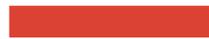
6

Workshop closing
& thanks





THANK
YOU



Stay in touch:



www.ukpact.co.uk



michael.boulle@iclei.org

