

LOCAL GOVERNMENTS

FINANCING OPTIONS FOR SUSTAINABILITY PROJECTS

GUIDE



Table of contents



01	Introduction	3
02	Why you need a financing strategy	5
03	Organisational alignment of your financing strategy	7
04	Financing options & pros and cons	9
05	Integrating your financing strategy	61



Written by:

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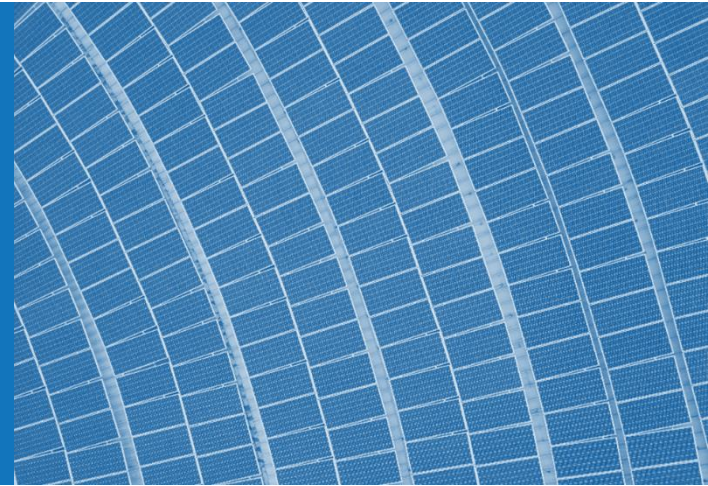
Co-CEO, 100% Renewables

About 100% Renewables



100% Renewable Energy – Zero Emissions

We see a future when all organisations will be powered with renewable energy and will have zero net emissions.



CLIMATE ACTION STRATEGIES

Our core service offer is developing climate action strategies and action plans that have organisational buy-in and are cost-effective.



OUR MISSION

We help our clients respond to climate change while driving financial performance.



OUR CLIENTS

Large energy-using businesses and government organisations

Overview



OPTIMAL FINANCING STRATEGY FOR LOCAL GOVERNMENTS, © 100% RENEWABLES

01

FREE MONEY

Grants
and
incentives



02

INTERNAL FINANCING

Money with low
opportunity cost. From
budget, REF, carbon price



03

COUNCIL BORROWS

Typically for capital-
intensive projects. Low
interest finance



04

THIRD PARTY

Higher financing costs.
Lease, EPC, PPA,
community energy





02

Why you need a financing strategy

Reasons you need a financing strategy



- Most sustainability initiatives require some sort financing
- Need to plan ahead to align with
 - Strategic and delivery/operational plans
 - Budgetary cycles
 - Sustainability targets
- Determine the best way to finance sustainability projects given your circumstances and objectives

A photograph of three business professionals in an office setting. They are standing around a wooden table, and their hands are stacked on top of each other in a gesture of teamwork and agreement. The person on the left is wearing a grey suit jacket and a light blue checkered shirt. The person in the middle is wearing a dark blue suit jacket. The person on the right is wearing a white shirt. In the background, there is a white coffee cup on a blue and white saucer, a spiral-bound notebook with a pink sticky note, and a laptop. A large blue circle is overlaid on the right side of the image, containing the text '03 Organisational alignment' in white.

03 Organisational alignment

Aligning a local government's financing strategy with strategic and operational plans



**Community
Strategic Plan
(CSP)**



**Sustainability
Strategy**



**Financing
Strategy**



**Operational and
Delivery Plans**



A hand with black nail polish and gold rings holds a white pen over a silver calculator on a wooden desk. The calculator has a digital display showing '123456789'. In the background, there are papers, including one with the word 'INVOICE' visible. A blue circular overlay with a white border is positioned on the right side of the image.

04

What are your
financing
options?

Financing options



Free

Pre-existing and future incentives and grants

Internal funding

Environmental levy/
Special Rate Variation

Self-financed through
budgeting process

Self-financed
through REF

Internal carbon price

Council borrows

Loan financing

Third party

Equipment lease

On-bill financing

Onsite PPAs

Energy Performance
Contracts (EPC)

Community energy
projects

1. Pre-existing and future incentives and grants



- Solar:
 - Small-scale Technology Certificates (STCs)
 - Large-scale Generation Certificates (LGCs)
- State-based white certificate schemes, e.g.,
 - NSW: ESCs • SA: REES
 - VIC: VEECs • ACT: EEIS
- State-based funding
- Grants and incentives
- Potential CEFC and ARENA financing

Impacts of establishing and maintaining financing from incentives and grants



People resources to establish, upskilling



Setting up internal systems



Maintaining systems and skills



Pre-existing and future incentives and grants



Provide discounts on renewable energy and energy efficiency projects (or ongoing revenue in the case of LGCs)

Less internal resistance for sustainability initiatives

Doesn't compete with funds for other projects



Special skills required for grant appl. process

Grants may need matched funding

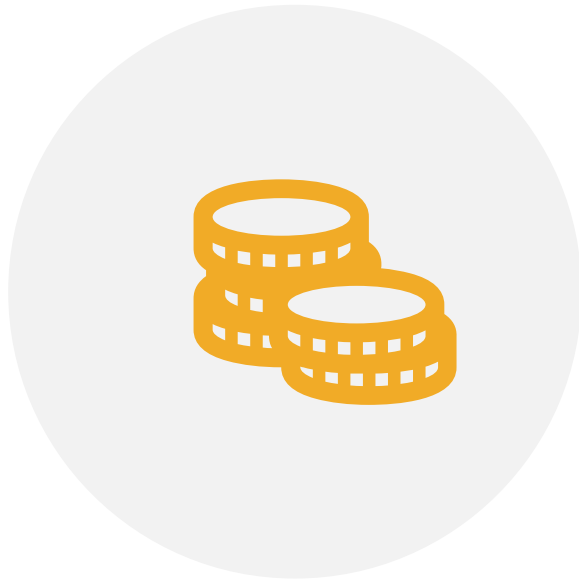
Grants may not align with budget cycles

Need to have projects 'shovel-ready' to apply

Always need to investigate when grant financing is available

Risk in LGC value

2. Environmental levy/Special Rate Variation



- Special rate paid by residents
- Generally used for protection of the natural environment, but can also be used for energy efficiency and solar PV projects

Impacts of establishing and maintaining financing from environmental levy/SRV



People resources to establish, upskilling



Setting up internal systems



Maintaining systems and skills



Environmental levy/Special Rate Variation



Continuous funds

Expectation that funds will be spent on environmental projects

Great financial return



Community has to be willing to accept expenditure on sustainability projects

Council has to account and report on how the money was spent

Case Study Environmental Levy – Ku-ring-gai Council



From http://www.kmc.nsw.gov.au/Current_projects_priorities/Key_priorities/Environment_sustainability/Environmental_Levy

Case Study Environmental Levy – Sunshine Coast Council



Environment Levy



Last updated: 09 Jun 2019

The Sunshine Coast's natural environment is one of our most important assets and is highly valued by council and our community.

Protecting, maintaining and enhancing our environment is a key priority for council. It is also an important element of the liveability of our community as well as the success of our economy.



Environment Levy overview

An important funding source contributing to the protection and enhancement of our biodiversity, waterways and wetlands and coastal areas.



Land acquisition program

Levy funds are invested into the acquisition of environmentally significant land to protect and enhance habitat areas.

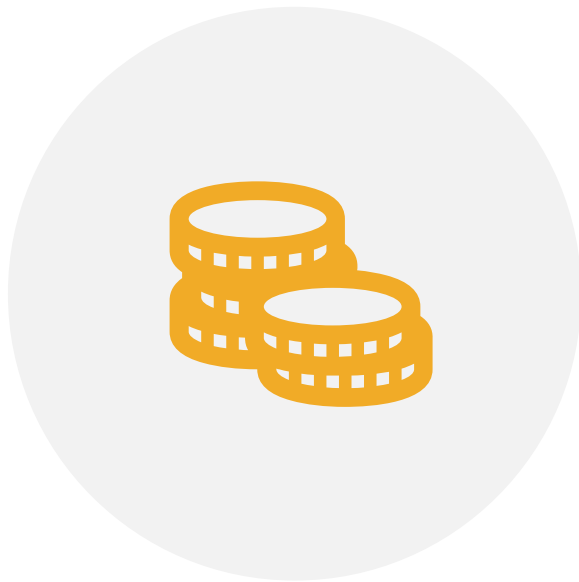


Progress and achievements

Learn about Environment Levy achievements and expenditure through the annual report and our updates page.

From <https://www.sunshinecoast.qld.gov.au/Environment/Environment-Levy>

3. Self-funded through normal budgeting process



- Energy efficiency and renewable energy projects financed directly from capital budget
- Possible options:
 - General funds
 - Water and sewer funds (regional councils)
 - Streetlighting fund (for SL upgrades)
 - Development contributions
- Projects may compete for funds with other activities
- Energy efficiency measures are likely to be funded through this option

Impacts of establishing and maintaining financing from budget



People resources to establish, upskilling



Setting up internal systems



Maintaining systems and skills



Self-funded through normal budgeting process

– pros and cons



- No contractual obligation
- In most cases best financial return
- Owning the equipment



- Financial and performance risk
- Responsibility for maintenance
- Less capital for core business activities

4. Self-funded through Revolving Energy Fund (REF)



- A REF is a sustainable financing mechanism
- Savings from sustainability projects are tracked and used to replenish the fund for the next round of investments
- Seed fund can come from capex or opex budget
- Essential that the portfolio performance and cash injections are forecast to see whether the fund will grow or deplete over time
- REFs can be very popular but need to be set up well in order to work

Self-funded through Revolving Energy Fund (REF)



Impacts of establishing and maintaining financing from a REF



People resources to establish, upskilling



Setting up internal systems



Maintaining systems and skills



Self-funded through Revolving Energy Fund (REF)

– pros and cons



Monetary investment spent many times without reducing its value

Financing of sustainability projects becomes an organisational habit

Can make it easier to get sustainability projects over the line



Verification of savings can be challenging and expensive depending on the method used

Requires time to implement and convince stakeholders

Requires seed financing and availability of money in the fund to be functional

Council resolution may be required

Case Study REF – Penrith City Council



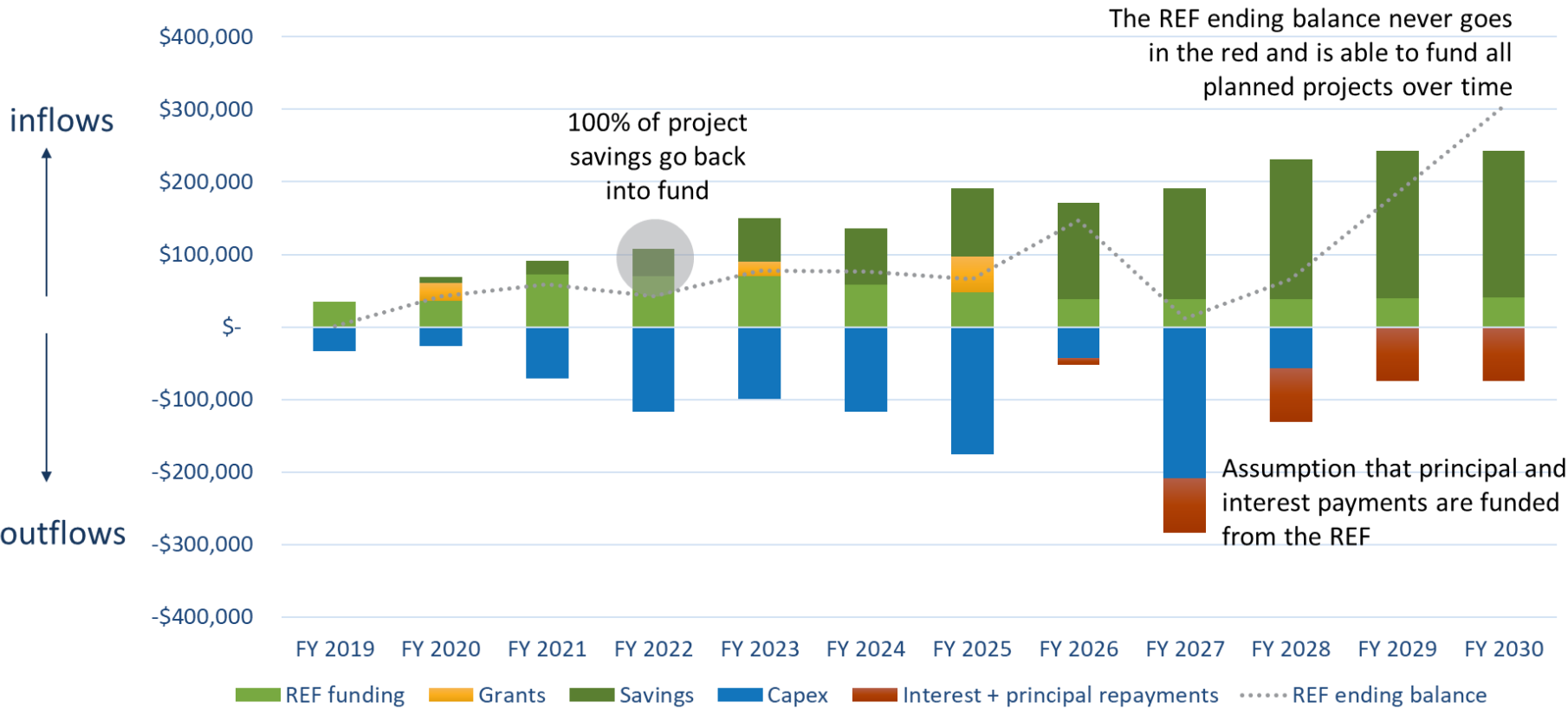
- Penrith Council has a forward financing financial reserve
- Balance maintained through payback of cost savings from projects
- Initially used an actual savings approach, but found that this was too difficult to implement
- Switched to estimated savings
- 100% of realised savings reinvested into the REF for 3 years
- Council ensured asset managers were in charge of electricity bills to ensure incentive to reduce costs

Modelling case study - REF and loan financing

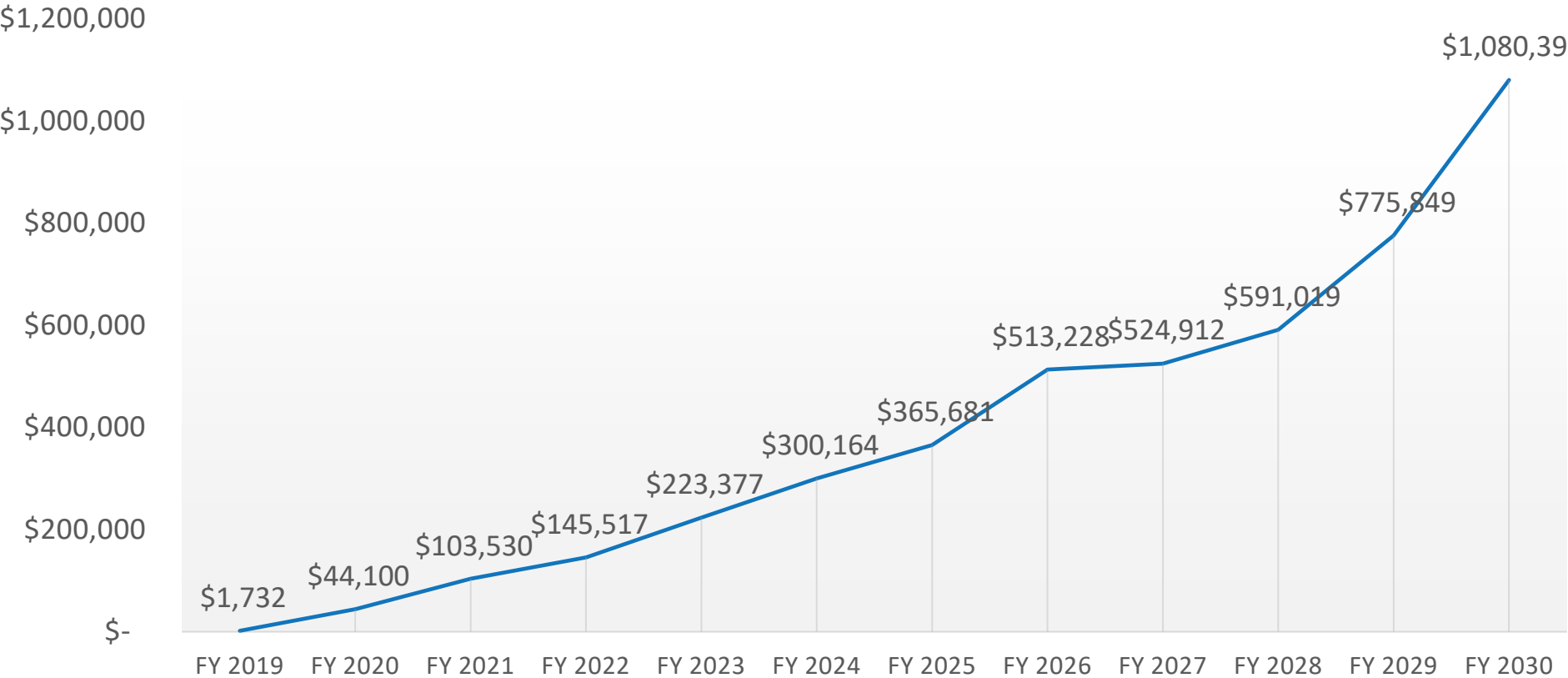


- Regional council with commitment to reach zero net emissions developed a renewable energy plan
- The Plan was split into short, medium and long term actions
- Capex needed to implement identified efficiency and solar actions: \$2.4m
- Yearly environmental levy (\$40K - \$50K) to be put in Revolving Energy Fund
- The council needed financial modelling:
 - How long would it take to implement all actions using the REF?
 - What is the cashflow if all actions are loan funded and implemented immediately?
 - What is the impact if only 50% of savings go into REF?
 - What is the impact if savings go back into the working fund after ten years?

Modelling case study - REF and loan financing - budget



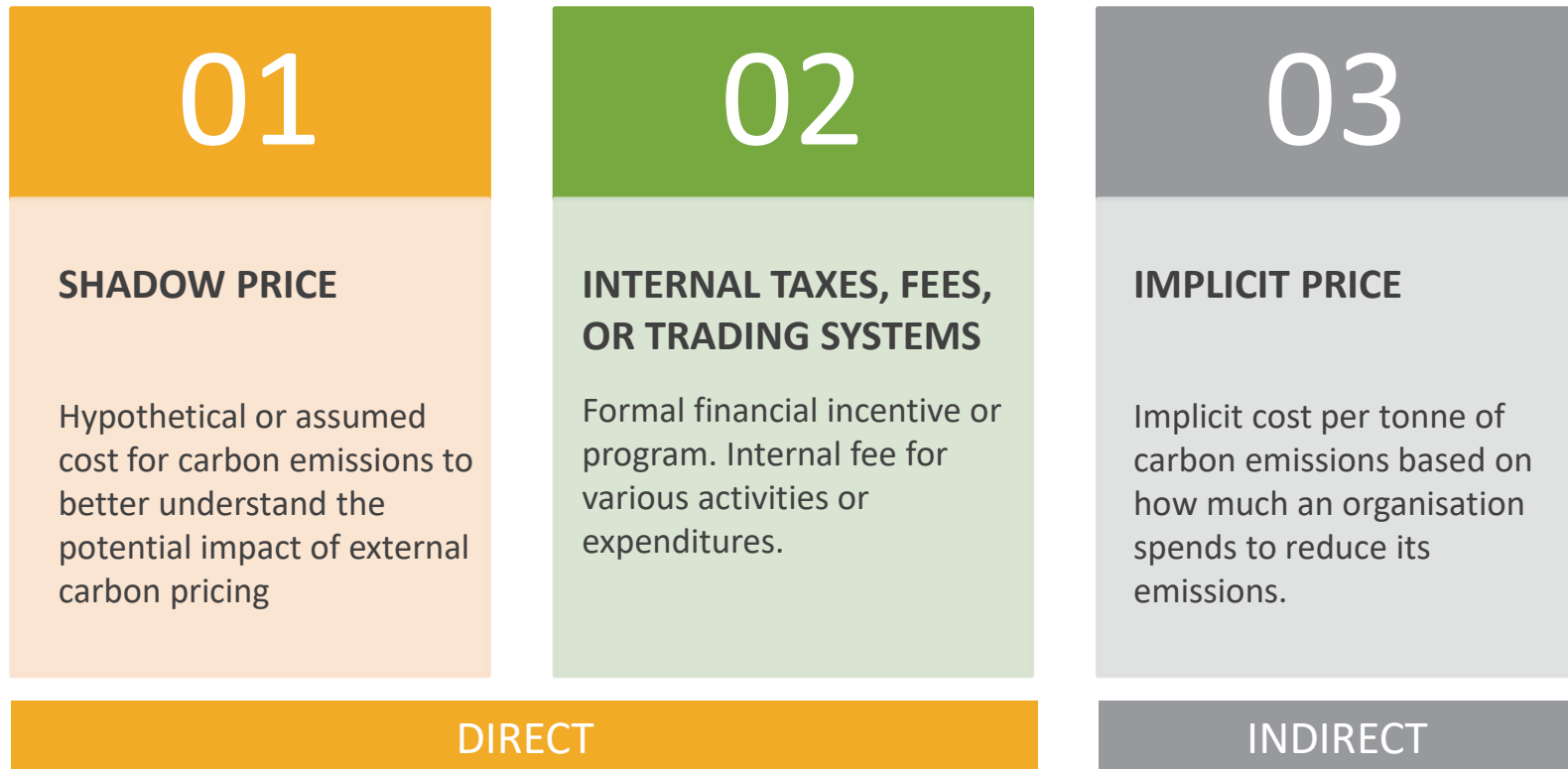
Modelling case study - REF and loan financing, cumulative cashflow



5. Internal carbon price



A value that organisations voluntarily set to internalise the economic cost of their GHG emissions



Impacts of establishing and maintaining financing from internal carbon price



People resources to establish, upskilling



Setting up internal systems



Maintaining systems and skills



Internal carbon price– pros and cons



Easier to fund sustainability initiatives

Shift in organisational thinking to be less carbon intensive

Ability to establish a Science-Based Target



Difficult to implement

Difficult to generate buy-in from business units with high emissions

Case Study– Internal carbon price



- **Microsoft** – Carbon Fee
 - Assigned a carbon fee in 2012 across its business units
 - Funds used to pay for energy efficiency projects, renewable energy projects and launching new product lines
- **National Australia Bank** – Implicit price on carbon
 - Introduced in 2010 to fund its goal of becoming carbon neutral through offset purchases and energy efficiency projects
- **ENGIE** – Shadow price
 - Implemented a price on carbon for future investments to lower investment in high emissions energy generation

HOW TO SET AN INTERNAL CARBON PRICE



1

Calculate your
carbon impact



2

Establish
reduction targets



3

Get support and
set carbon price



4

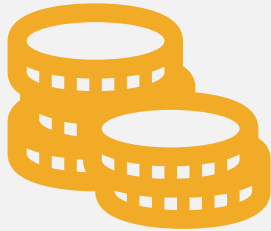
Integrate into
strategy & planning



5

Monitor
performance

6. Loan-funded



- Lender provides capital
- Pre-determined variable interest rate
- Repayments are made over time
- Typically used for expensive equipment

Impacts of establishing and maintaining financing from a loan



People resources to establish, upskilling



Setting up internal systems



Maintaining systems and skills



Loan-funded – pros and cons



No or reduced upfront cost

Capital available for other projects

Councils have access to cheap interest rates



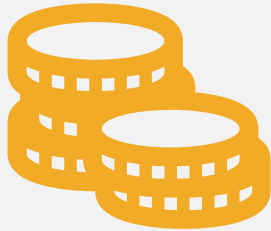
Economic and technical risk if equipment becomes unusable and the loan is on the balance sheet

Financial returns are less compared with self-funded equipment

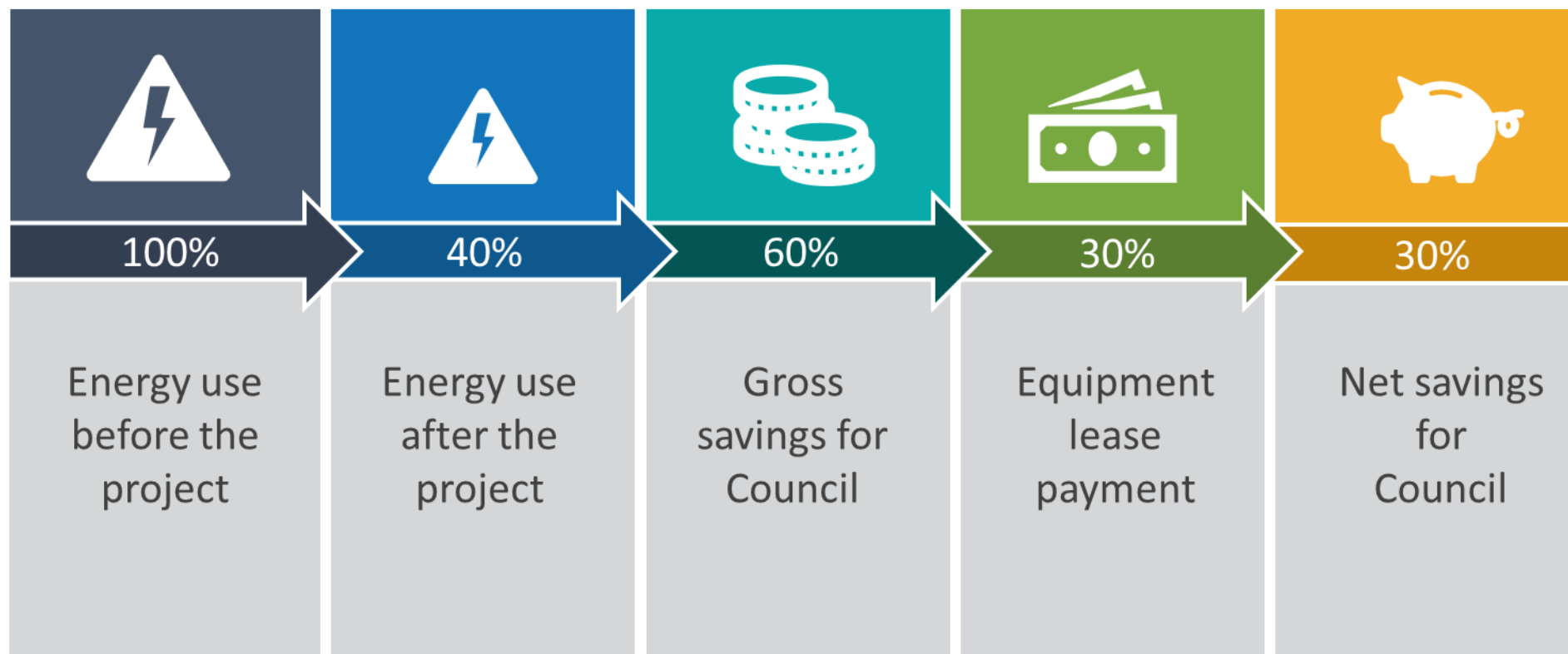
7. Equipment lease



- Supplier owns and installs equipment
- Monthly repayments for 5-10 years
- Options for end of the lease:
 - Remove
 - Rollover
 - Buyout



Equipment lease



Impacts of establishing and maintaining financing from an equipment lease



People resources to establish, upskilling



Setting up internal systems



Maintaining systems and skills



Equipment lease – pros and cons



Supplier responsible for maintenance

No or modest upfront cost

Cost of investment spread out

Access to new equipment after the lease has run out

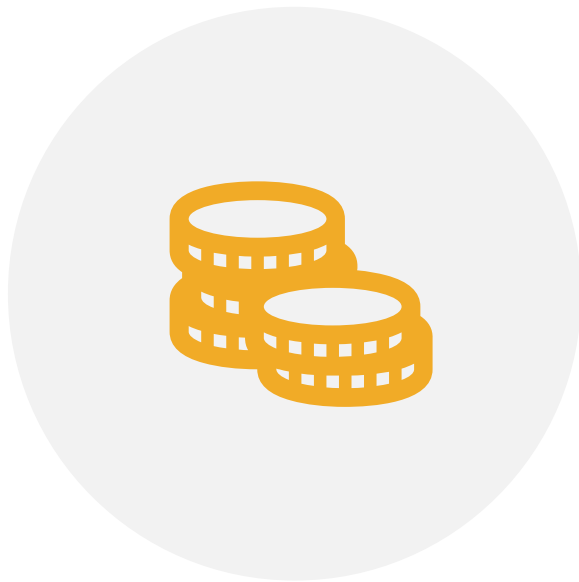


Repayments with interest are incurred

Equipment is more expensive compared to upfront purchases

No ownership

8. On-bill financing



- Retailer or network provider (streetlighting) installs equipment
- Repaid through a repayment charge on the energy bill/streetlighting bill
- Once payments are made, ownership can be transferred

Impacts of establishing and maintaining financing from on-bill financing



People resources to establish, upskilling



Setting up internal systems



Maintaining systems and skills



On-bill financing – pros and cons



No or reduced upfront cost

Payment via utility/streetlighting bill
reduces risk of default



Repayment liability on the balance
sheet

May tie customer to the energy
retailer

May be more expensive in the long
run

9. Onsite Power Purchase Agreement (PPA) – behind-the-meter



- PPA provider designs, constructs, owns, operates and finances the renewable energy generation equipment
- PPA provider retains ownership and responsibility for maintenance
- Company agrees to purchase certain amount of electricity from provider
- Purchase price of electricity lower than bundled price of electricity from the grid

■ Solar PPAs



PPA Provider

- Owns, finances and installs the solar PV
- Operates and maintains the system



Solar PV system

- Installed at no initial costs
- Can be transferred upon expiry



Your organisation

- Buys solar energy from PPA provider cheaper than grid
- Buys less energy from retailer



Electricity Retailer

- Electricity retail agreement
- Continues to supply electricity from grid
- May purchase excess solar generation



Excess electricity



Impacts of establishing and maintaining financing from an onsite PPA



People resources to establish, upskilling



Setting up internal systems



Maintaining systems and skills



Power Purchase Agreement (PPA) – pros and cons



Cheaper price for electricity

No upfront cost

Provider takes responsibility of maintenance and equipment replacement

LGC risk is taken by the solar PPA provider (>100kW)

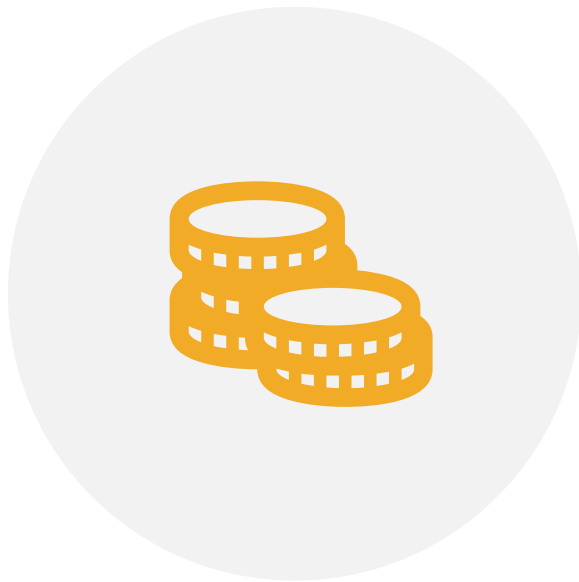


Not beneficial for small systems especially those under 100 kW

Ties customer to the PPA provider

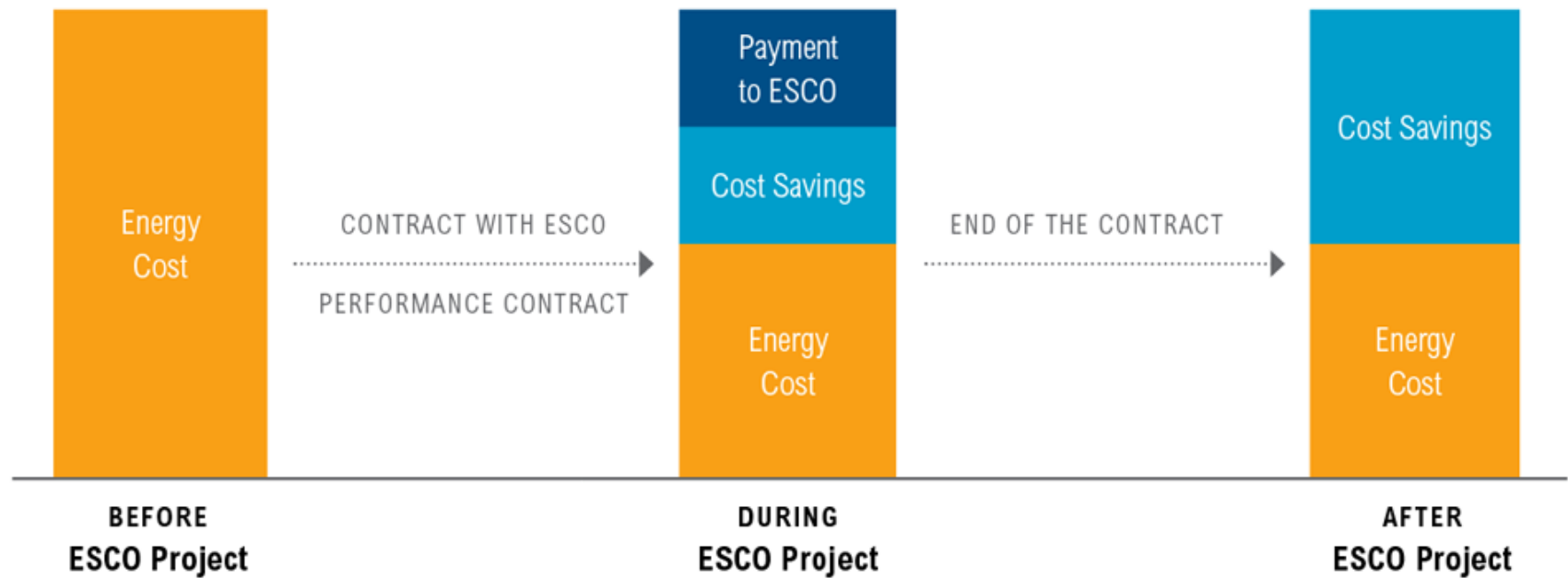
Higher cost in the long run for solar

10. Energy Performance Contracts (EPCs)



- An EPC is a contract between an energy service company (ESCO) and an organisation
- Under an EPC,
 - the ESCO is engaged to improve the energy efficiency of a facility
 - the ESCO examines a facility,
 - evaluates the level of energy savings that could be achieved,
 - then offers to implement the project and guarantee those savings over an agreed term
 - The guaranteed energy savings from the project pay for the capital investment required for the project

Energy Performance Contracts (EPCs)



Impacts of establishing and maintaining financing from an EPC



People resources to establish, upskilling



Setting up internal systems



Maintaining systems and skills



Energy Performance Contracts (EPCs) – pros and cons



Upgrade aging and inefficient assets

Technical and financial risk borne by ESCO

Guaranteed savings reduces the risk of savings erosion over time



Require a large project above \$500K to attract ESCOs

Not cost effective for addressing a single measure

Establishing governance arrangements

Skills are being outsourced to another provider, no upskilling in the organisation

Energy Performance Contracts (EPCs) – Warringah Council Case Study



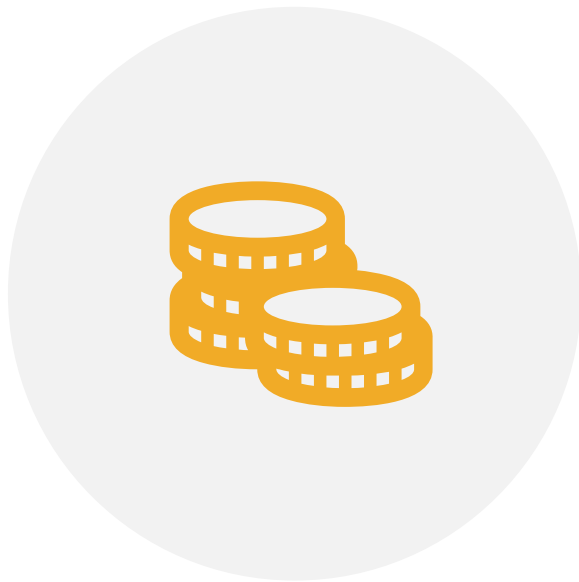
- Commenced an EPC to improve energy efficiency in several buildings
- Contract valued at \$560,000 over two years with replacement of
 - Lighting
 - Plant and equipment
- Saved
 - 1,155 GJ
 - 300 t CO₂-e

Energy Performance Contracts (EPCs) – City of Yarra Council Case Study



- The City of Yarra Council engaged Ecosave in a \$3.3 million 10-year EPC
- 18 Council buildings involved
- Measurement and verification plan at all sites
- Measurement of baseline consumption of plant and equipment
- Proposed energy saving measures were installed
- After installation, actual consumption was measured over a 12 month period
- As a result, verifiable proof that the following outcomes were achieved:
 - Electricity savings: 160 MWh
 - Gas savings: 3,950 GJ
 - Carbon savings: 429.1 tonnes
 - Cost savings: \$47,518

11. Community energy projects



- Community energy projects are usually either structured as a PPA or a community loan
- With a PPA,
 - renewable energy is developed and owned by the community,
 - The host buys the energy (example: Repower Shoalhaven)
- With a loan,
 - funds are raised from investors and lent to the host who builds and operates renewable energy projects.
 - The host repays the loan (example: Lismore City Council, Farming the Sun)
- Council could be host to a community energy project to develop solar projects in the local area

Impacts of establishing and maintaining financing from a community project



People resources to establish, upskilling



Setting up internal systems



Maintaining systems and skills



Community energy projects – pros and cons



Financial benefits returned to the community

Transfer of skills and knowledge of renewable energy to the local community

Raises the profile of Council

Shares the financial rewards with the community



Take a long time to set up

Financial benefits are not as great as compared to being funded from capital budget

Significant resources required to implement

Summary of financing options 1/2



	People resources to establish, upskilling	Setting up internal systems	Maintaining systems and skills
1. Existing/future incentives & grants	Low effort	Low effort	Low effort
2. Environmental levy/SRV	Low effort	High effort	Low effort
3. Normal budgeting process	Low effort	Low effort	Low effort
4. Revolving Energy Fund	High effort	High effort	High effort
5. Internal carbon price	Low effort	High effort	Low effort
6. Loan-funded	Low effort	Low effort	Low effort

Legend:



Summary of financing options 2/2



	People resources to establish, upskilling	Setting up internal systems	Maintaining systems and skills
7. Equipment lease	Low effort	Low effort	Low effort
8. On-bill financing	Low effort	Low effort	High effort
9. Onsite PPA	High effort	High effort	Low effort
10. Energy Performance Contracts	High effort	High effort	High effort
11. Community energy projects	High effort	High effort	High effort

Legend:



A close-up photograph of two hands clasped together in a supportive grip. The hand on the left is larger and appears to be a man's, while the hand on the right is smaller and appears to be a woman's. The fingers are interlaced, and the thumbs are pressed against each other. The skin is fair and the background is a plain, light color.

Remember: Financing options are not mutually exclusive

A close-up photograph of a person's hand holding a white pen, poised over a silver and black calculator on a wooden desk. The hand has black nail polish and wears several gold rings. The calculator has a digital display and various function buttons. In the background, there are papers, including one labeled 'INVOICE', and a metal binder. A large blue circle with a white border is overlaid on the right side of the image, containing the text '05 Integrating financing into your strategy'.

05

Integrating
financing into
your strategy

Method for integrating the financing with your sustainability strategy



Select financing options

- Pre-evaluate possible financing options and select shortlist
- How does each option relate to Council's current situation?
- Risks and opportunities of each option?
- Workshop with key stakeholders to determine best options
- Develop a draft pathway – determine when to finance what project
- Model scenarios based on different inputs

Finalise financing strategy

- Get feedback from leadership team
- Refine Council's preferred financing options and scenario modelling
- Develop a final pathway for implementation
- Get financing strategy adopted, if required

Overview



OPTIMAL FINANCING STRATEGY FOR LOCAL GOVERNMENTS, © 100% RENEWABLES

01

FREE MONEY

Grants
and
incentives



02

INTERNAL FINANCING

Money with low
opportunity cost. From
budget, REF, carbon price



03

COUNCIL BORROWS

Typically for capital-
intensive projects. Low
interest finance



04

THIRD PARTY

Higher financing costs.
Lease, EPC, PPA,
community energy



Need help with developing your Financing Strategy?



- How does each option relate to Council's current situation?
- What are the risks and opportunities of each option?
- What are the financial outcomes of the various funding options?

100% Renewables is specialised in helping our clients develop business cases and model financial outcomes over a specific timeframe.

If you need help with shortlisting financing options, preparing a workshop or presentation for your senior management, or with modelling different funding options, please talk to us.



BARBARA ALBERT

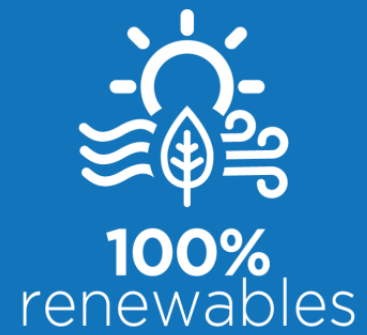
Co-CEO, 100% Renewables



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THANK YOU



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