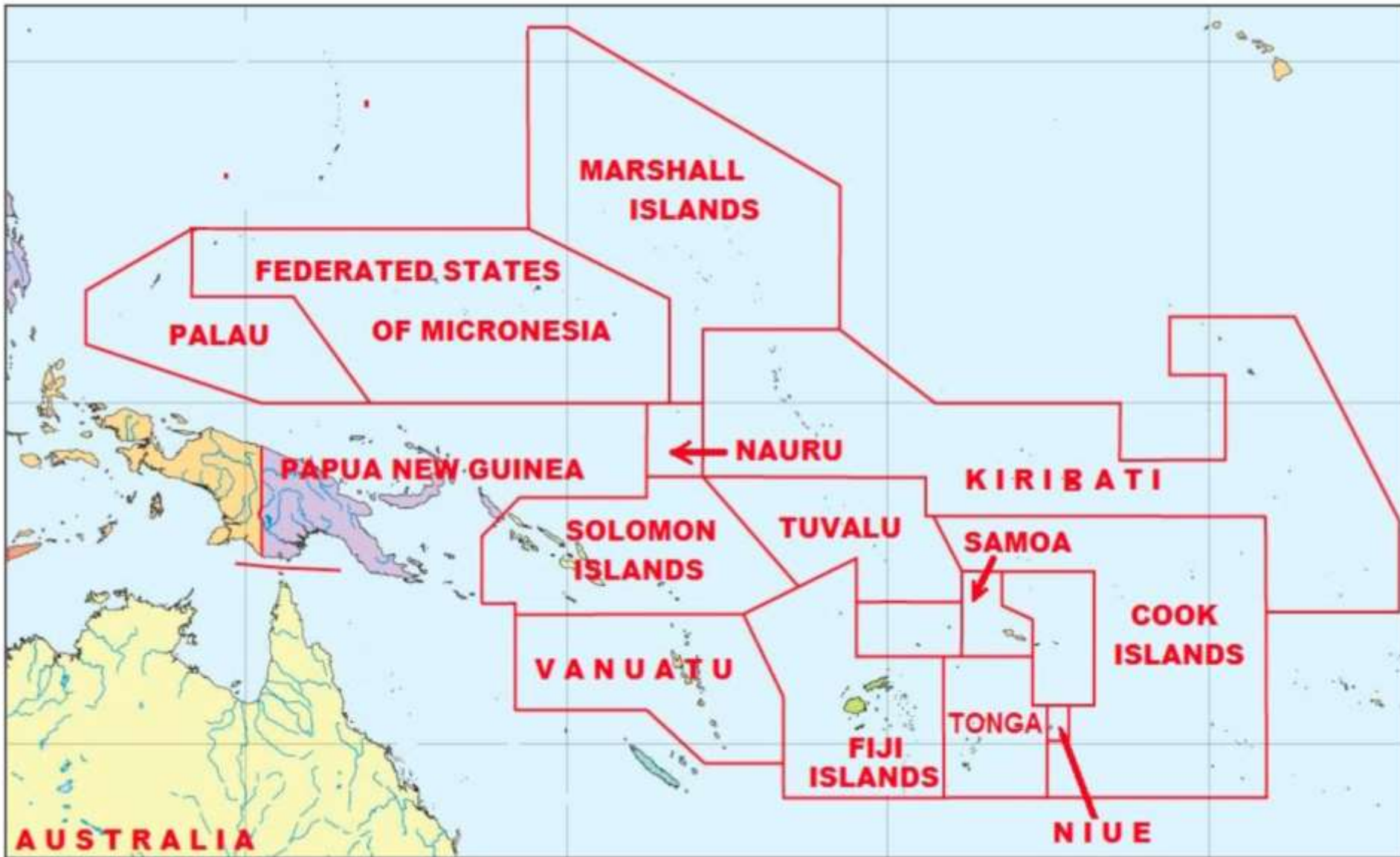




# How do renewable energy ambitions affect donor-funded electrification efforts in Pacific island countries?

2018 Pacific Update  
6 July

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The Australian National University



Source: Dornan (2015).

# Outline

- Context and the purpose of this research
- Methodology
- Results
- Discussion
- Conclusion and recommendations

# Context

PICs need to tackle both:

- high renewable energy targets for climate change.
  - rural electrification for **further development**.
- Rural electrification with renewable energy looks like an optimal solution.
  - But, investment in urban areas with renewables is a more cost-effective means of achieving the targets.
- ⇒ High renewable energy targets and rural electrification are not necessarily complementary.

## Context

- Betzold (2016): ‘PICs are likely to focus attention on urban areas to meet their ambitious renewable energy goals’ (p. 316).
  - Dornan & Shah (2016): high renewable energy targets create incentives for investment in existing electricity grids, which ignore the problem of limited access to modern energy services in PICs.
- ⇒ In deploying renewable energy, PICs might be ignoring rural electrification.

# The purpose of this research

This research will:

1. investigate donor-funding for energy projects;  
In the energy sector in PICs, foreign aid is the single most important source of investment.
  2. assess the extent to which such funding is focused on rural electrification;
  3. examine whether the situation has changed over time.
- ⇒ How do renewable energy ambitions of 14 PICs affect donor-funded rural electrification efforts?

# Outline

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- **Methodology**
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# Methodology

## Aid for energy projects between 2013 and 2015

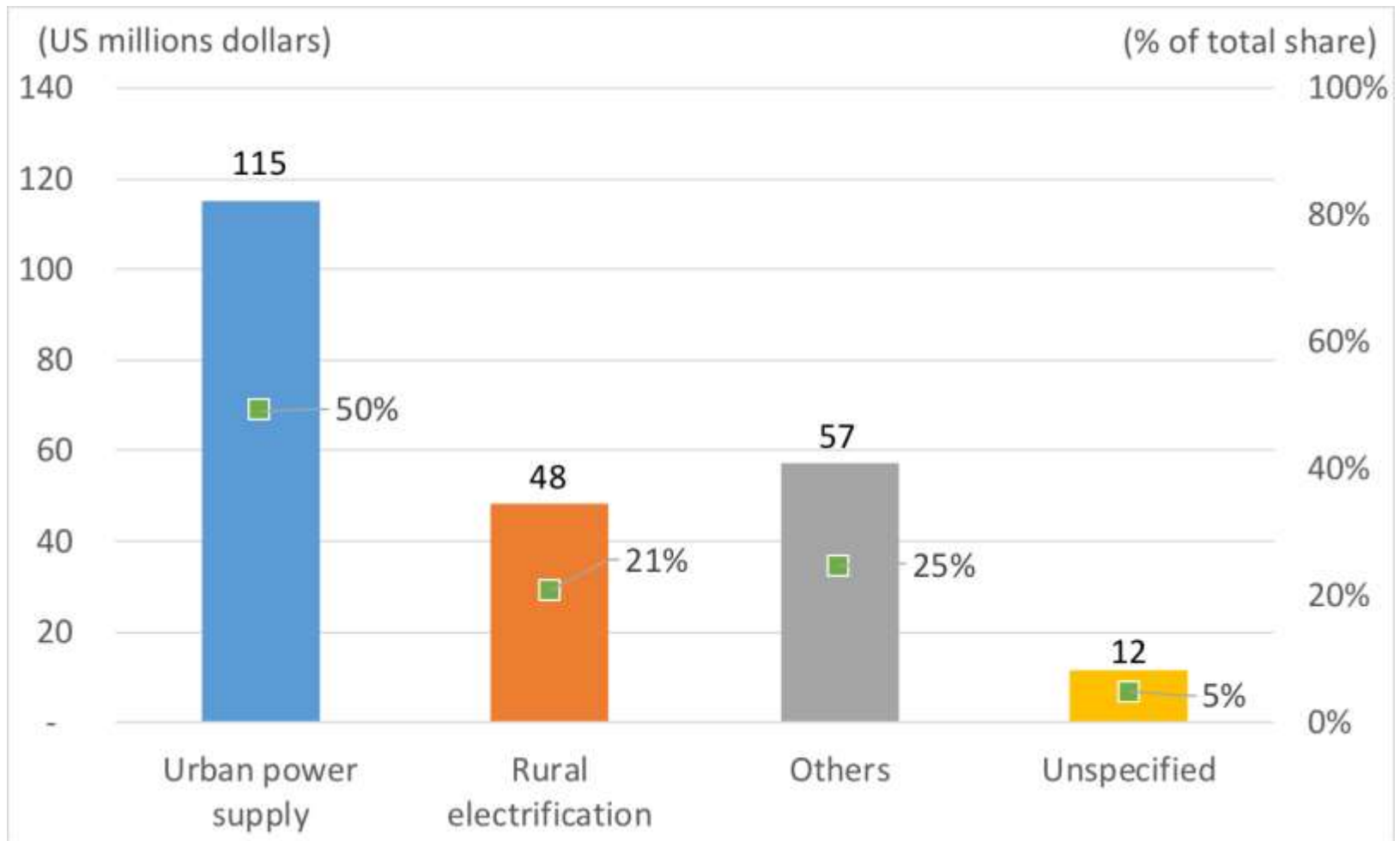
Urban power supply projects	Rural electrification projects	Other projects	Unspecified projects
On-grid renewable energy (RE) generation	Off-grid RE generation	Energy policy	—
On-grid non-RE generation	Off-grid non-RE generation	Administrative management	—
Transmission and distribution maintenance	Transmission and distribution extension	Capacity building	—



# Outline

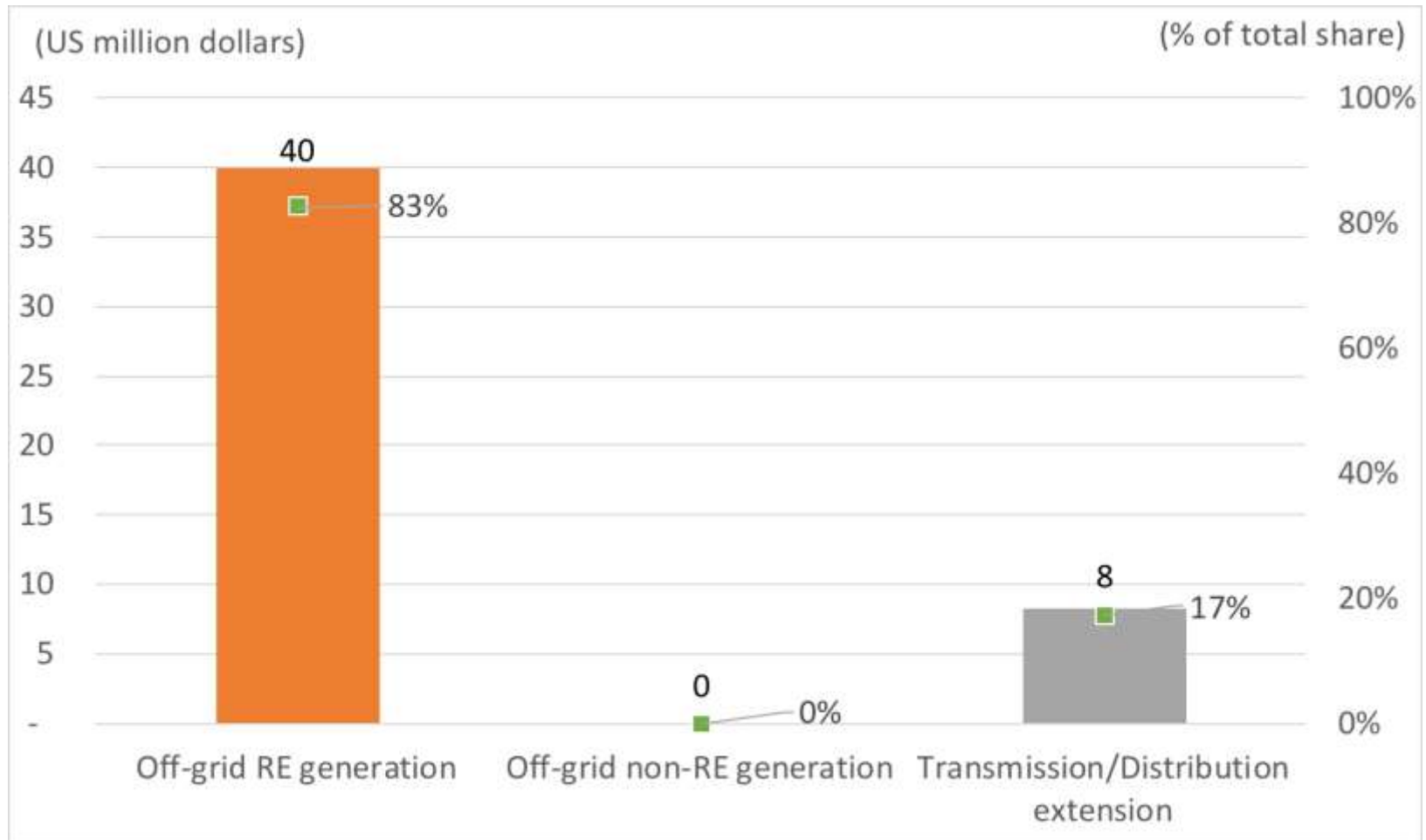
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# Energy projects between 2013 and 2015



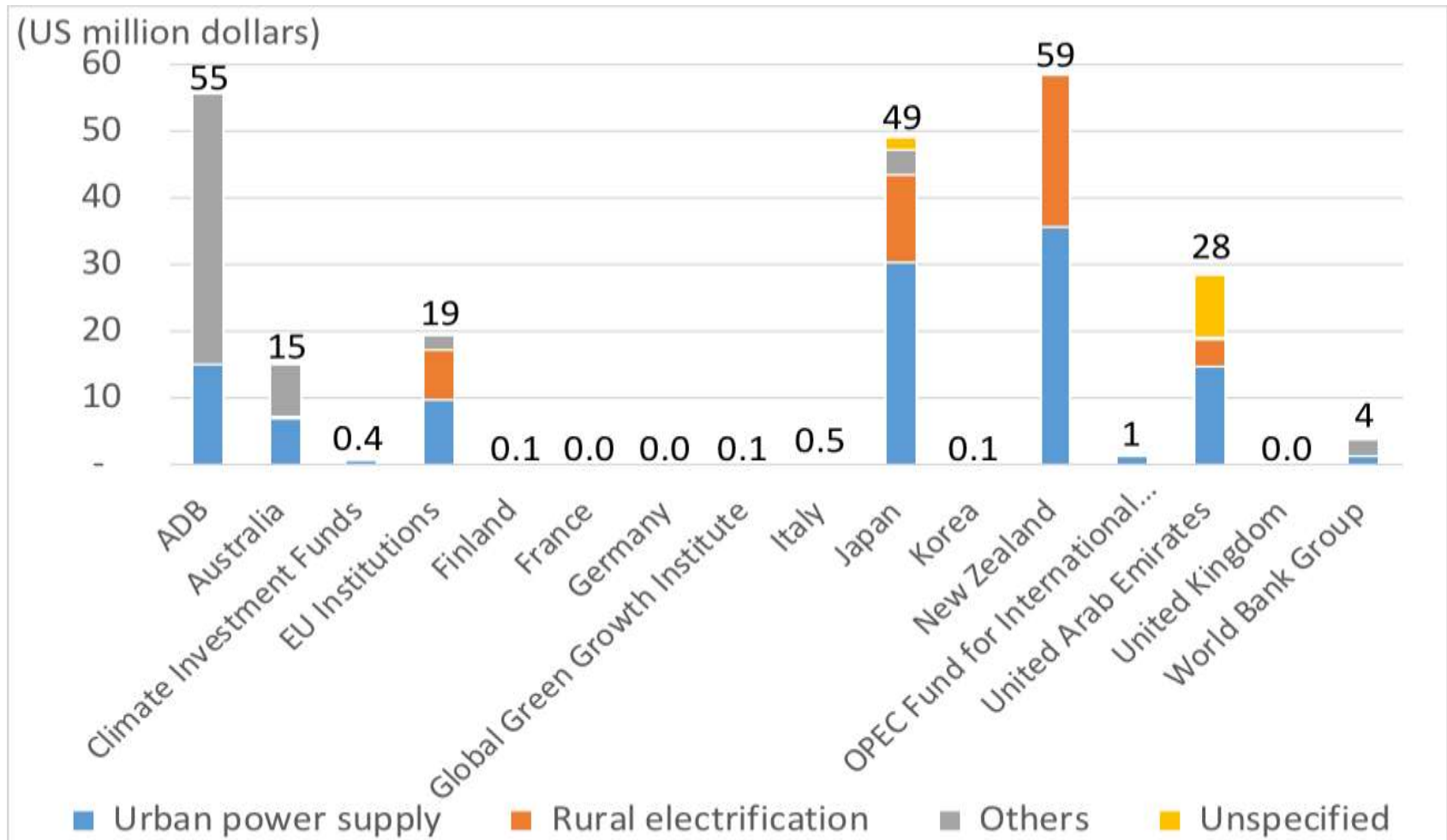
Source: Lowy Institute (2018).

# Rural electrification for the three years



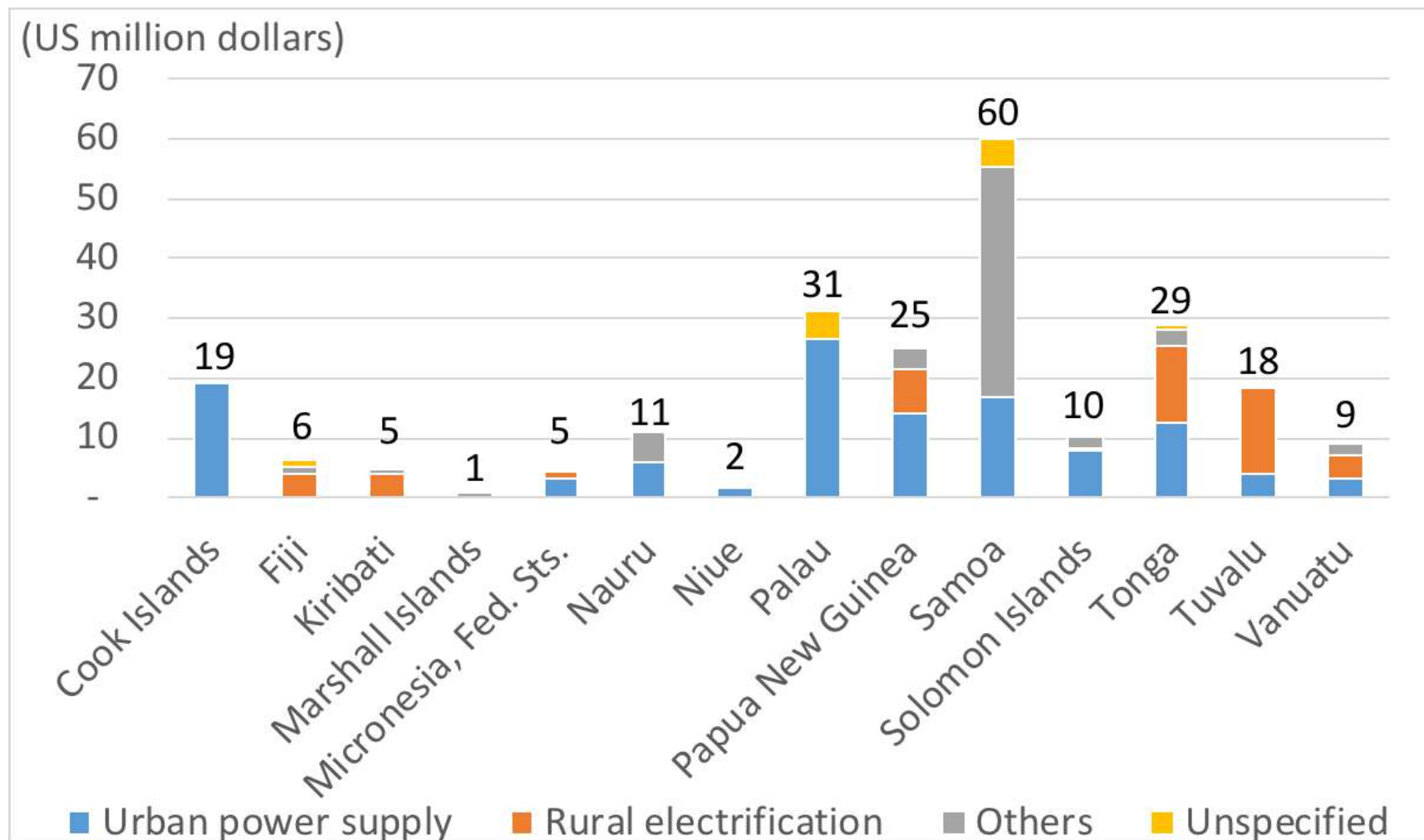
Source: Lowy Institute (2018).

# Energy projects by donor



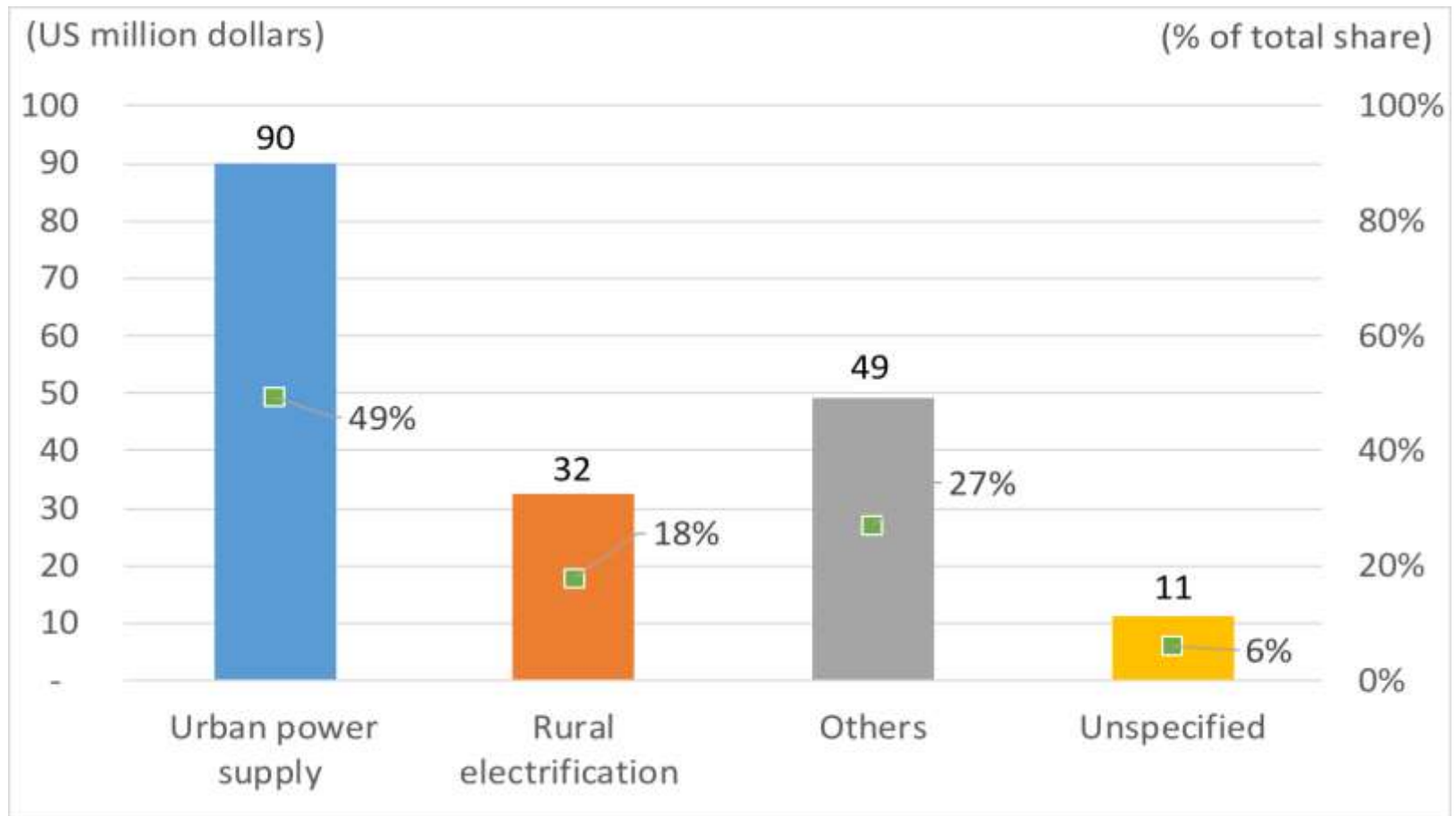
Source: Lowy Institute (2018).

# Energy projects by recipient



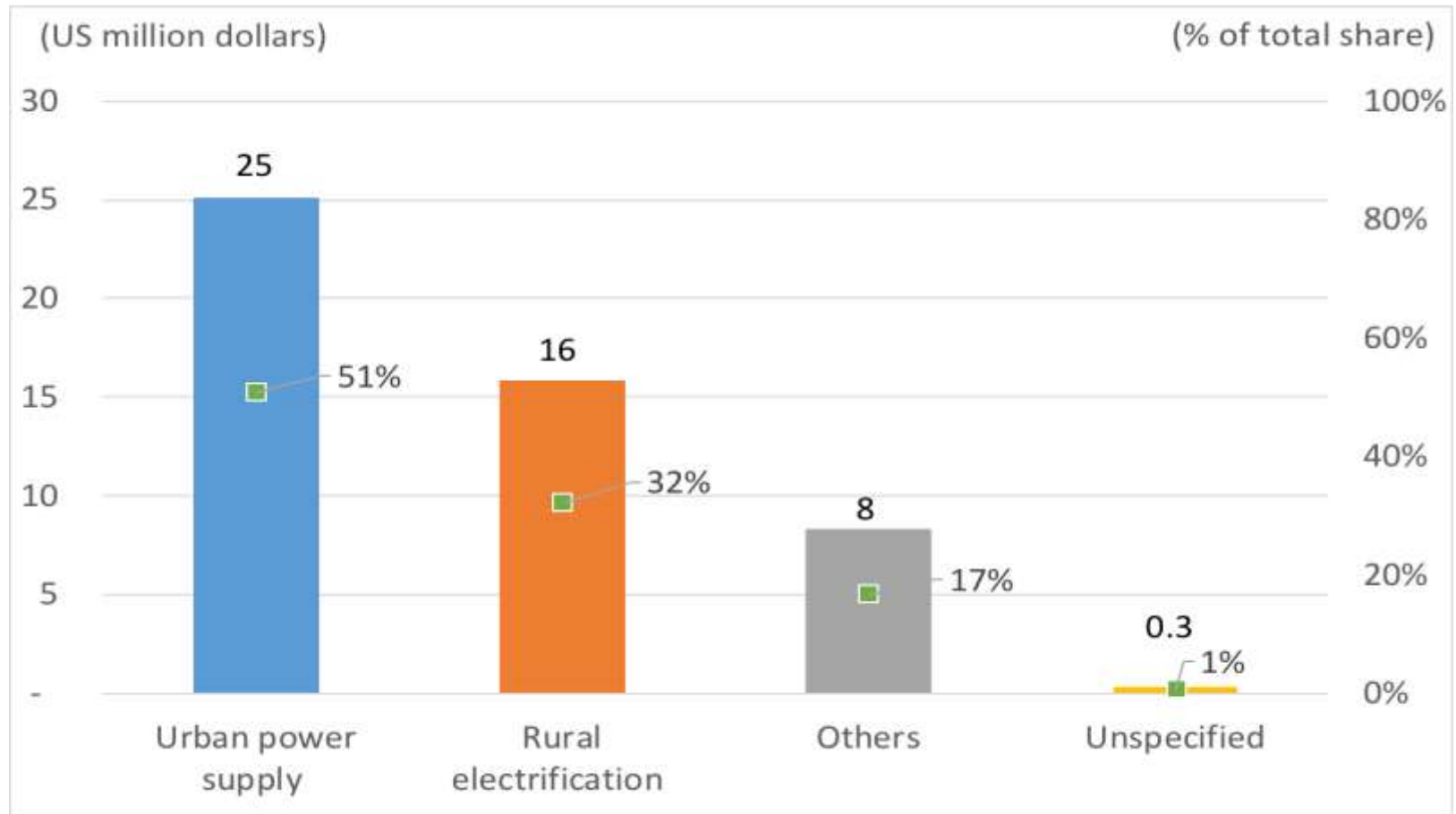
Source: Lowy Institute (2018).

# Energy projects in 10 countries with higher electrification rates



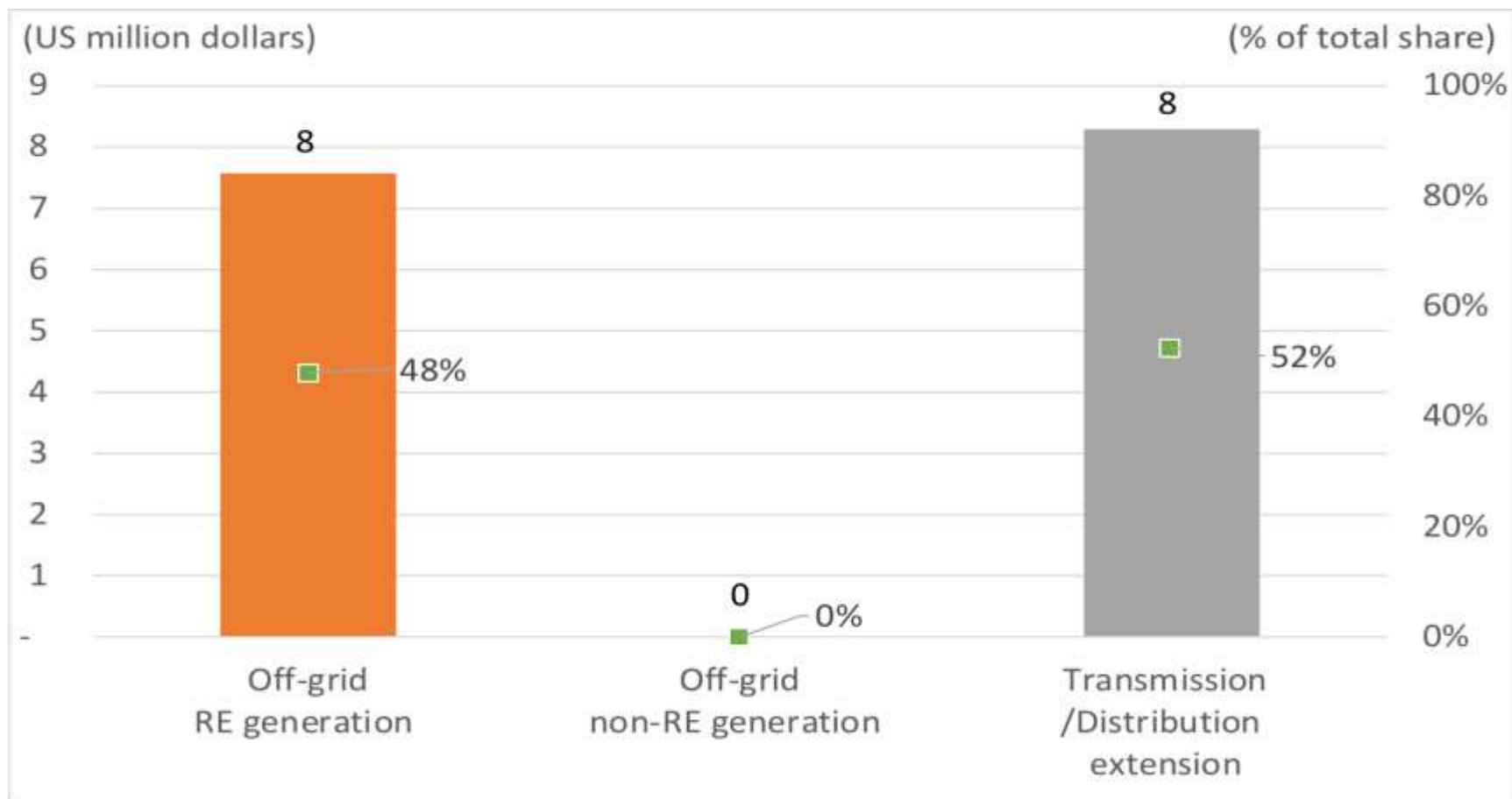
Source: Lowy Institute (2018).

# Energy projects in 4 countries with lower electrification rates



Source: Lowy Institute (2018).

# Rural electrification projects in the 4 countries



Source: Lowy Institute (2018).



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# Current situation for rural electrification

- PICs are using aid funds
  - to improve urban power supply;
  - to enhance rural electrification.
- Major donors:
  - New Zealand, Japan, the EU; the UAE.
- Major recipients:
  - Kiribati, Tuvalu, Fiji, Tonga, Vanuatu, PNG, Federated States of Micronesia; the Solomon Islands.
- In both countries with higher and lower electrification rates, rural electrification projects are significant.

## Rural electrification situation over time

- Comparison of this analysis with previous studies suggests that foreign aid for rural electrification has increased over time.
- The weight of rural electrification clearly becomes more significant for the period in this research than that in the prior research.
- PICs have expanded rural electrification along with their high renewable energy targets over time.

## Rural electrification situation in the future

- More foreign aid does not guarantee more aid for rural electrification.
- If high renewable energy targets are a motivation for more expenditure, it is possible that aid for rural electrification declines in the future.
- What happens as renewable energy targets are met?
  - Would aid shift to rural electrification?
  - Or would aid for rural electrification decline along with overall aid levels?

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# Conclusion

- At the moment, PICs are successfully pursuing both high renewable energy targets and rural electrification at the same time.
- However, there is no guarantee this will be the case in the future.
- PICs need to ensure that both aid and government spending on energy projects in the future are helping their people realise **further development**.

# Recommendations

1. To collect and analyse data on basic or minimum demand for electricity and energy at the household level in rural areas in each country.
2. To start collecting, accumulating, and analysing more detailed data about the productive use of energy at the firm and industry levels.
3. To allocate more resources to rural electrification. Even if foreign aid is reduced, they should keep the expenditure for rural electrification.



Thank you.