

# Parliamentary Portfolio Committee on Energy, 26<sup>th</sup> October, 2018

SOUTH AFRICAN WIND ENERGY ASSOCIATION



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# Vision

**A thriving commercial Wind power industry in South Africa, part of a growing domestic and international renewable power industry that is recognised as a major contributor to social, environmental and economic security.**



# Purpose

SAWEA's purpose is to perform to its highest ability the unique role that a member-driven association can play in enabling this vision to be realised. In order to achieve this purpose, SAWEA activities are focused on:

**Advocacy** for the implementation of ambitious, consistent South African energy policy that harnesses the country's immense wind resource and results in the streamlined growth of a wind power asset base;

**Facilitation** and promotion of excellent practice in the associated localisation, socio-economic and economic development and transformational areas of wind power;

**Endorsement** and recognition of excellent operational practice in the generation of wind power;

Provision of pertinent information to **current and prospective investors** seeking to enter the SA wind power market;

Provision of up to date, dependable **public information** on the socio-economic contributions of the wind Industry in South Africa – particularly as these relate to rural development, to women and to youth;

Through Wind power, **promotion of renewable power in large and small-scale applications** in South Africa as a least cost option and as a direct contribution to the achievement of national development and climate change objectives;

**Promotion of wind and renewable power investment in Africa** through partnership and dialogue both within South Africa and the region.



# SA Power Sector: Contextual Concerns

1

Historically  
Coal-dominant  
economy

2

Paradigm shift:  
decarbonised  
economy

3

The legacies of  
the Minerals-  
Energy complex

4

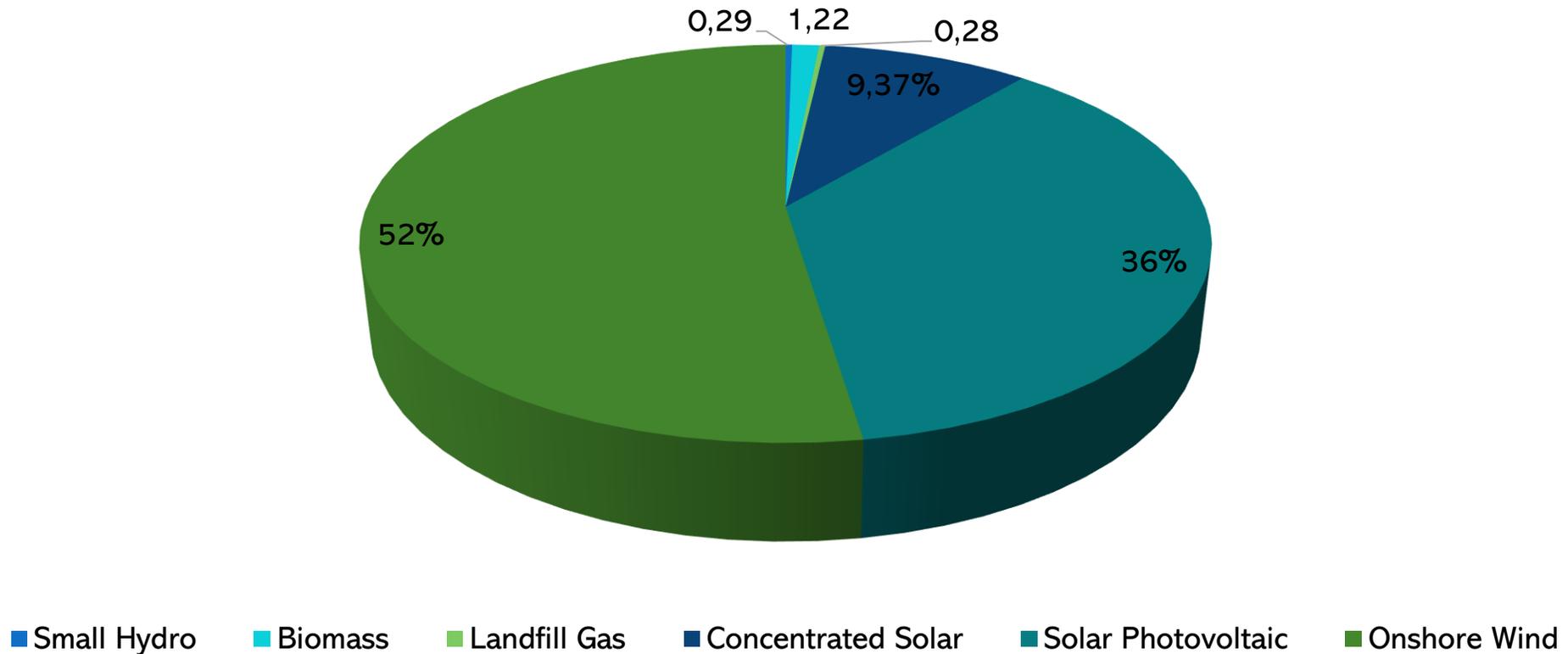
Recognition of  
just, climate-  
aware energy  
transition

5

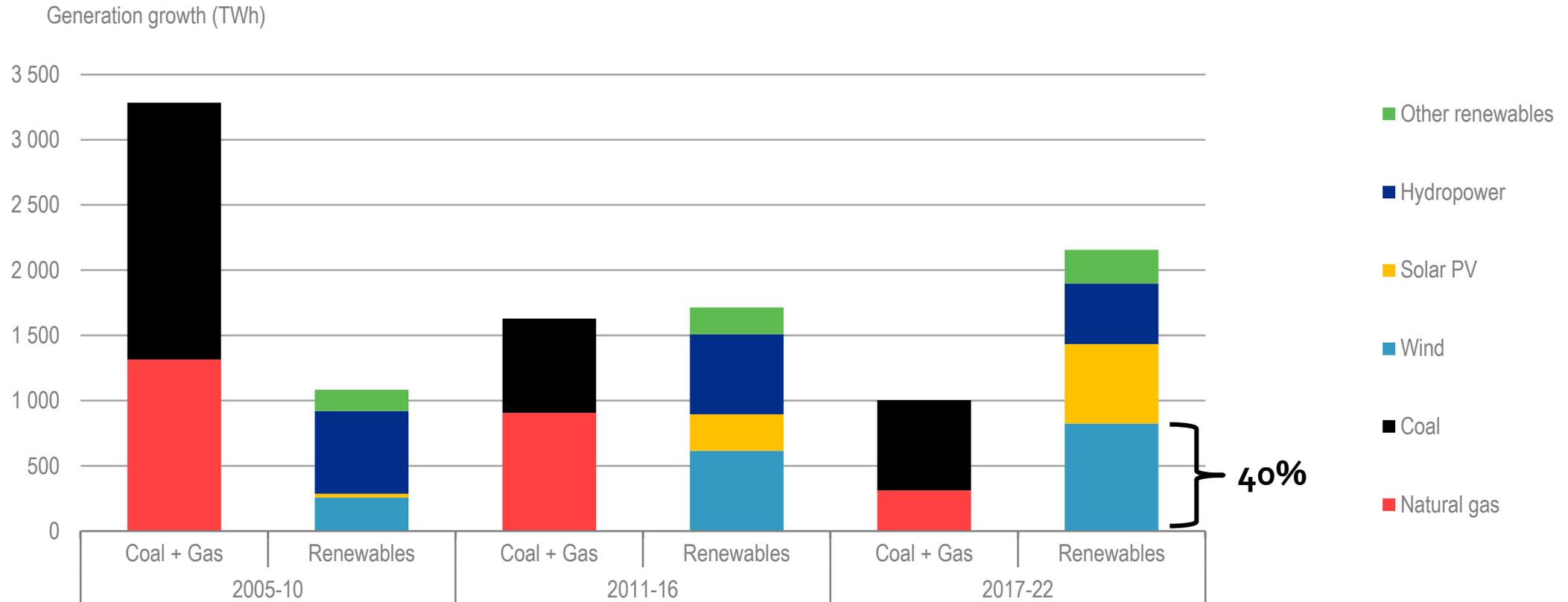
Socio-economic  
plans relevant  
to the transition

# Utility-scale Wind & Solar, leading investments in the SA energy transition; wind 52% of RE

REI4P Investment Share per Technology (March 2018)



## Global growth in net generation of renewable and fossil fuel electricity



**Renewable generation to expand by over a third from 2017-22, surpassing 8000 TWh and reaching 30% of total world electricity generation**

# The South African Energy transition



## IRP2010 set an investment pathway for the energy transition

The allocated share of **coal-fired power** in SA's electricity mix would **decline to 65%** (from 92%) **by 2030**, while the **nuclear share** would increase to **20%**. The differentiated **renewables share** increased to **9%** (**17.8 GW**).

Overall effect on supply mix would be that **RE** would make up **42%** of all newly built capacity by 2030.



# The purpose of Integrated Resource Planning

**Long-term:** to ensure sustainable development considering technical, economic and social constraints as well as externalities.

**Short-term:** identification of the required investments in the electricity sector that maximise the national interest at minimum present-day cost.

**Government's core commitments:** growing access to energy in both the short-term and the long-term, while providing a clear investment roadmap that can be regularly updated.



# IRP2010 Draft update

- Stop-start RE procurement
- Bad for employment and local manufacturing sector growth



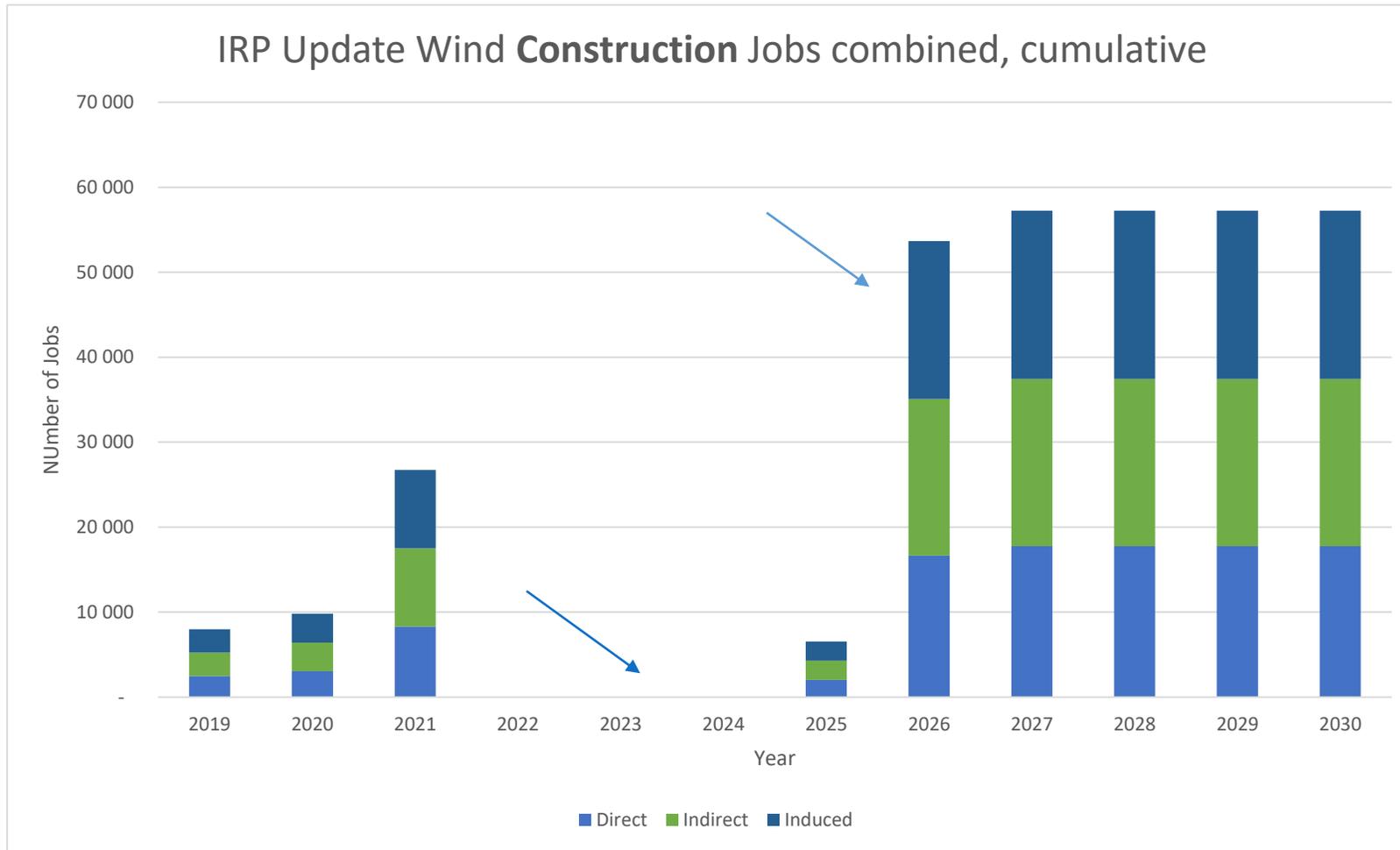
# Effects of stop-start procurement

- On Employment
- On Local Manufacturing sector growth

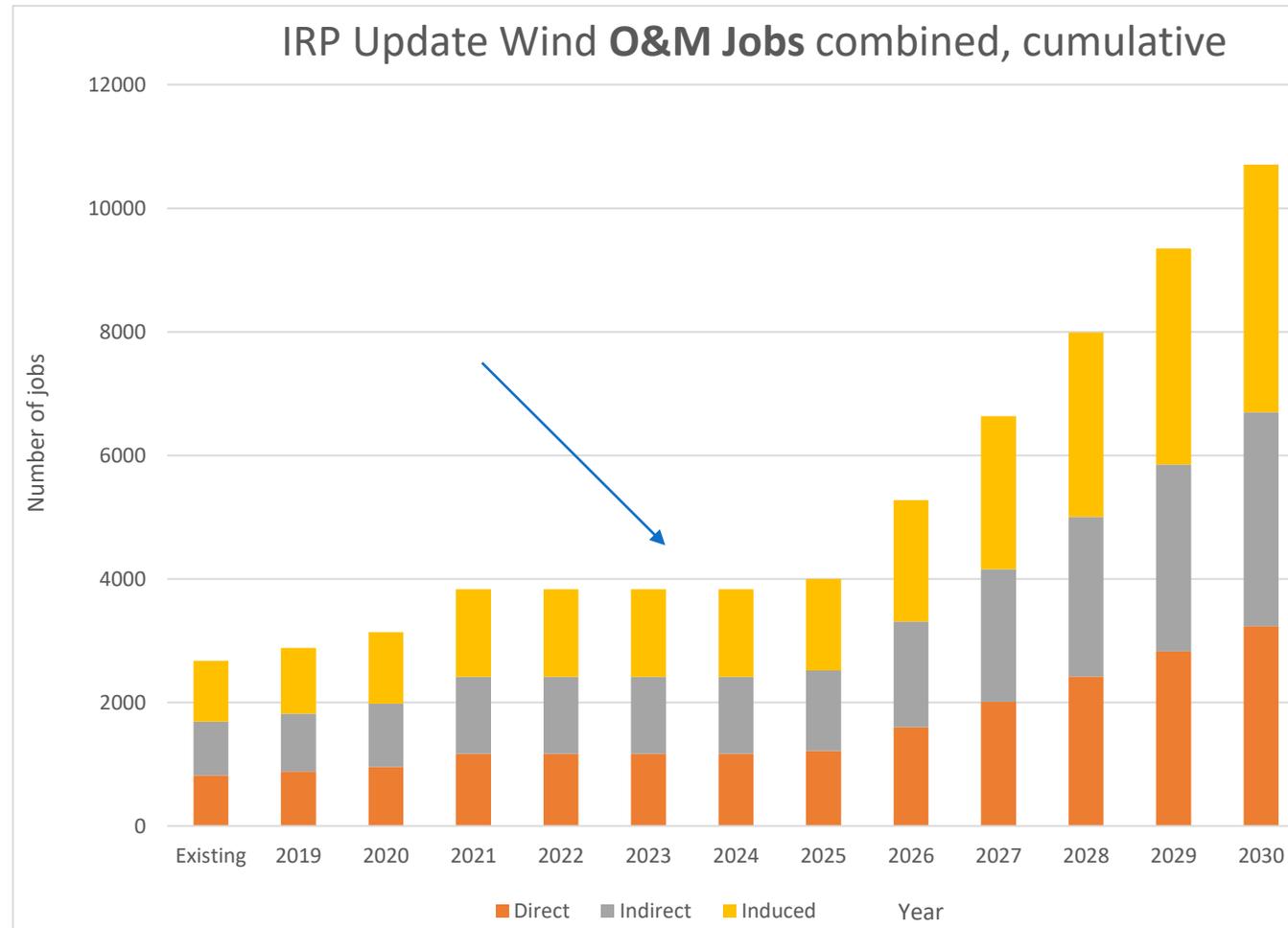
# Employment

- The procurement gap has a direct and immediate impact on employment:
  - it will result in many manufacturing facilities and support services planning for closure or retrenchments.
  - HR investments made to-date in training and skills development, especially by manufacturing facilities, will be lost.
- The sudden spike in the commissioning of new wind from 2026 to 2030 would then create an enormous bottleneck for local manufacturing demand.

# The effect of the procurement gap on employment



# The effect of the procurement gap on employment



## By contrast: Employment potential

### Renewable energy IPPs are currently producing four times more jobs than operating Eskom plants

- DoE has confirmed in its March 2018 report that 1 883 people were directly employed by operational RE IPP projects.
- This is equal to 16% of the 12 000 people employed by Eskom generation.
- Given that RE IPPs produce only 4% of the power that Eskom generation produces, this confirms that operating RE IPPs are four times more employment intensive than operating Eskom plants.





# Local manufacturing Industry impacts

A 3-year procurement gap is not supportive of government's commitment to creating an employment-intensive local manufacturing sector.



# Local manufacturing Industry growth

- In REIPPPP Round 4 (2014/15) the Local Content commitments for wind energy ranged between 45% and 65%.
- Good for South African development!
- But, consistent procurement essential to provide investment certainty to ensure that the local manufacturing industry can grow and the necessary commitment targets actually met.



- Since the inception of the REIPPPP the wind industry has invested in the region of **R725 million in local manufacturing capacity**
  - **two** wind turbine tower **manufacturing facilities (Atlantis and Coega);**
  - **a steel manufacturing plant** that manufactures primary steel wind-related products;
  - facilities for manufacturing of all **internal elements** for wind turbine towers such as platforms, ladders/elevators and electrical infrastructure.
- These investments created **1,179 full-time manufacturing jobs.**

# Mid-term Employment & Manufacturing risks associated with Draft IRP Update

- A cumulative loss of at least R750 million in manufacturing investment
- The loss of 1,179 full- time manufacturing jobs
- The lost opportunity of bringing forward some of the 53,500 direct manufacturing jobs that can potentially be created through the implementation of smoothed procurement of the total wind allocation.
- The lost benefit to the South African economy to grow the domestic wind energy manufacturing sector and potentially grow the wind energy export sector.



## SAWEA recommends

1. The IRP update should be adjusted to smooth out and accelerate procurement of wind and PV energy allocations of at least 1 GW per annum between 2021 and 2030, so that the market risks associated with stop-start procurement are minimised.



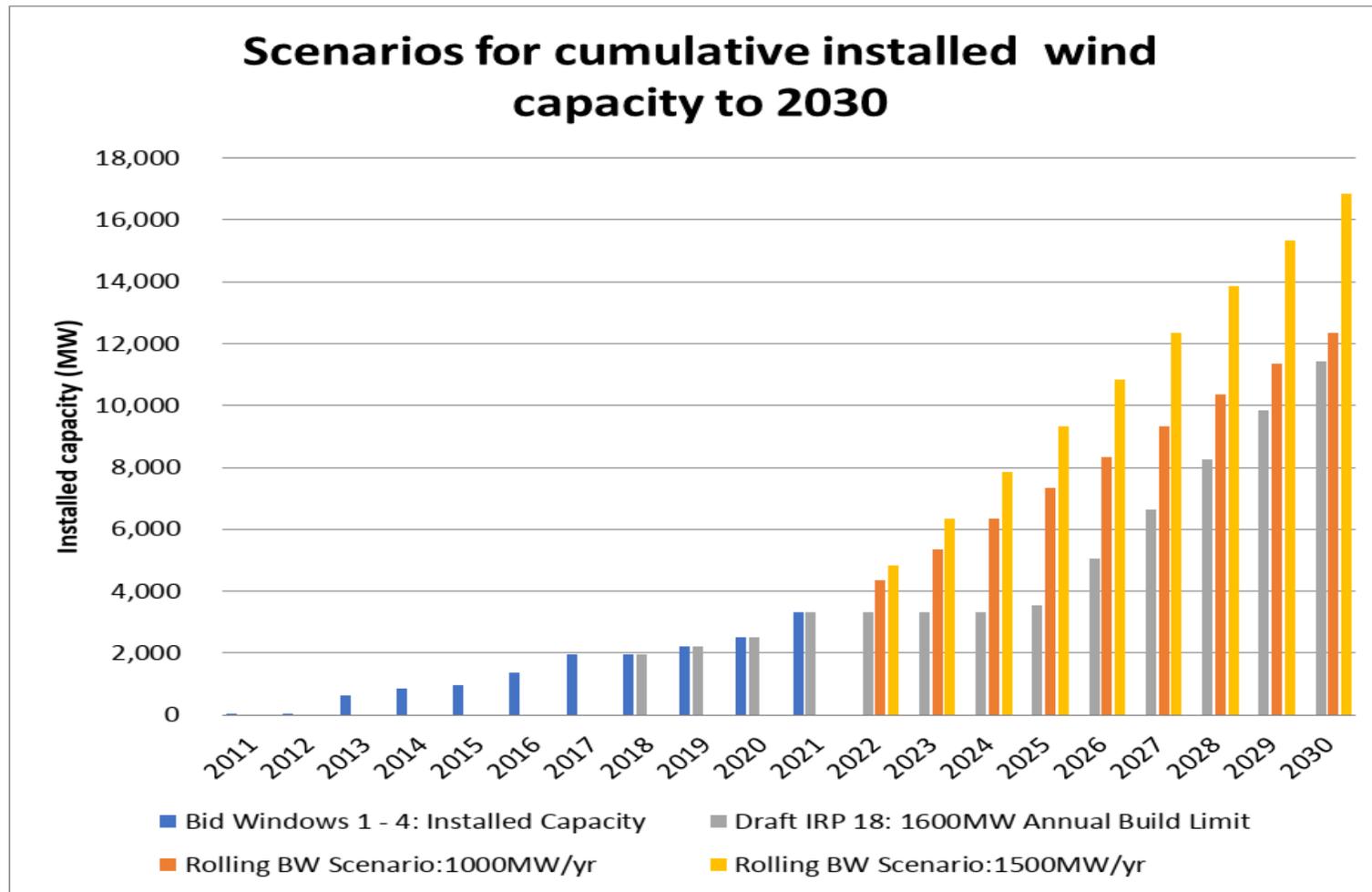
# SAWEA recommends

## 2. Re-run the IRP<sub>1</sub> scenario testing the following sensitivities:

- Reconsider Coal-related investment costs particularly those relevant to climate policy
- realistically lower Eskom fleet availability, without the last two units of Kusile
- exclude the two new coal IPPs
- consider the power system effect of Electric Vehicles, demand-side flexibility, and earlier decommissioning of the existing coal fleet due to environmental constraints, and the effect of carbon tax on the short-run marginal cost
- The resulting model findings would be likely to favour new wind capacity allocations of between 1.5 to 2.5 GW per annum smoothed out between 2021 and 2030.



# Address the procurement gap + ramp up annual wind power investment allocations – both can benefit SA





**Thank you for inviting SAWEA  
to make this presentation  
today.**

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