



Planning Challenges for  
Large Scale Integration  
of  
Renewable Energy Sources  
into the Barbadian Landscape

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## Quotation

- ▶ *“There may not be a business with a higher potential than the solar industry has today. By 2020, the solar industry is projected to install nearly 100 GW of solar annually, which would be enough to power 16.4 million homes”.*

Travis Hoiium, 2016

# OUTLINE

- ▶ Role of Planning
- ▶ Developing a Positive Strategy
- ▶ Rooftop Installations
- ▶ Wind Systems
- ▶ Use of Agricultural Lands
- ▶ The Way Forward
- ▶ Conclusion

# Why is planning for renewable energy important?

Planning has an important role in the delivery of renewable energy infrastructure in locations where the environmental impact is acceptable. Increasing the amount of energy from renewable technologies will ensure that Barbados has a reliable and efficient energy supply.

# Developing a Positive Strategy to Promote the Delivery of Renewable Energy

- ▶ Commitment to a Green Economy (GE) → improved human well-being and social equity, and significant ↓ environmental risks & ecological scarcities.
- ▶ Transitioning to a GE is key in ↓ our vulnerability to economic and natural shocks as we seek to chart a more sustainable path for the benefit of present and future Barbadians.
- ▶ Developing land use policies that promote and sustain a GE will be one of the key drivers and by implication an underlying principle that guides the scope and focus of the current update of the Physical Development Plan (PDP).

# Roof Top Installation of Solar Panels

- ▶ The installation of solar panels and PVCs often fit into the criteria of permitted development: i.e., development which **does not require** planning permission. However, this does not obtain for listed buildings.
- ▶ However, to qualify as permitted development the air gap; that is the distance from the bottom to the top of the panel must be less than sixteen (16) inches or 400 mm. Any structure in excess requires planning permission.



Roof Mounted PVC showing Air Gap

## LOCAL RESEARCH FINDINGS ON AIR GAP

- ▶ Recent technical research study by Rogers and Maynard of UWI show that the minimum suggested air gap for roof-mounted solar PV systems in Barbados was found to be 7.5cm or 3 inches.

# Wind Systems

- ▶ Requirements - formal application for planning permission & usually an EIA.
- ▶ Developer must submit a detailed report wrt likely environmental impacts and mitigation measures to reduce or eliminate these impacts.
- ▶ EIA should include a Non-Technical Summary which must be made available to for General Public to peruse for a period of  $\leq 28$  days.
- ▶ Developer must hold Public Meeting presenting project proposal & outlining any environmental impacts. Must include a Q&A segment.
- ▶ Developer must submit to TCDPO a detailed report of Public Meeting which forms part of the assessment process.

# Wind Systems

- ▶ Wind towers in excess of 300 ft are usually problematic for the current radar system in use at GAIA.
- ▶ It should be noted this matter is under review and the proposed Multilateration system will not be affected by towers of this height.

# Use of Agricultural Lands

- ▶ Scarcity of agricultural land → food security challenge.
- ▶ In the last three (3) years, TCDPO has received requests to change the use of 568 acres of agricultural land for the creation of solar farms.
- ▶ Planning permission has been granted for the change of use of 185 acres of agricultural land.
- ▶ TCDPO's policy is to ensure the preservation of agricultural lands, in particular in prime areas.
- ▶ Any consideration of the use of agricultural land for solar farms would be in those areas where there is Class V/VI agricultural lands.

## Agricultural Lands

Evident that current trend is unsustainable and TCDPO will continue to liaise with its partners in the Ministries of Agriculture and Energy to ensure that there is a **sustainable balance**.

The Amended PDP will seek to ensure that agricultural land is preserved for food production.



# SOLAR FARM

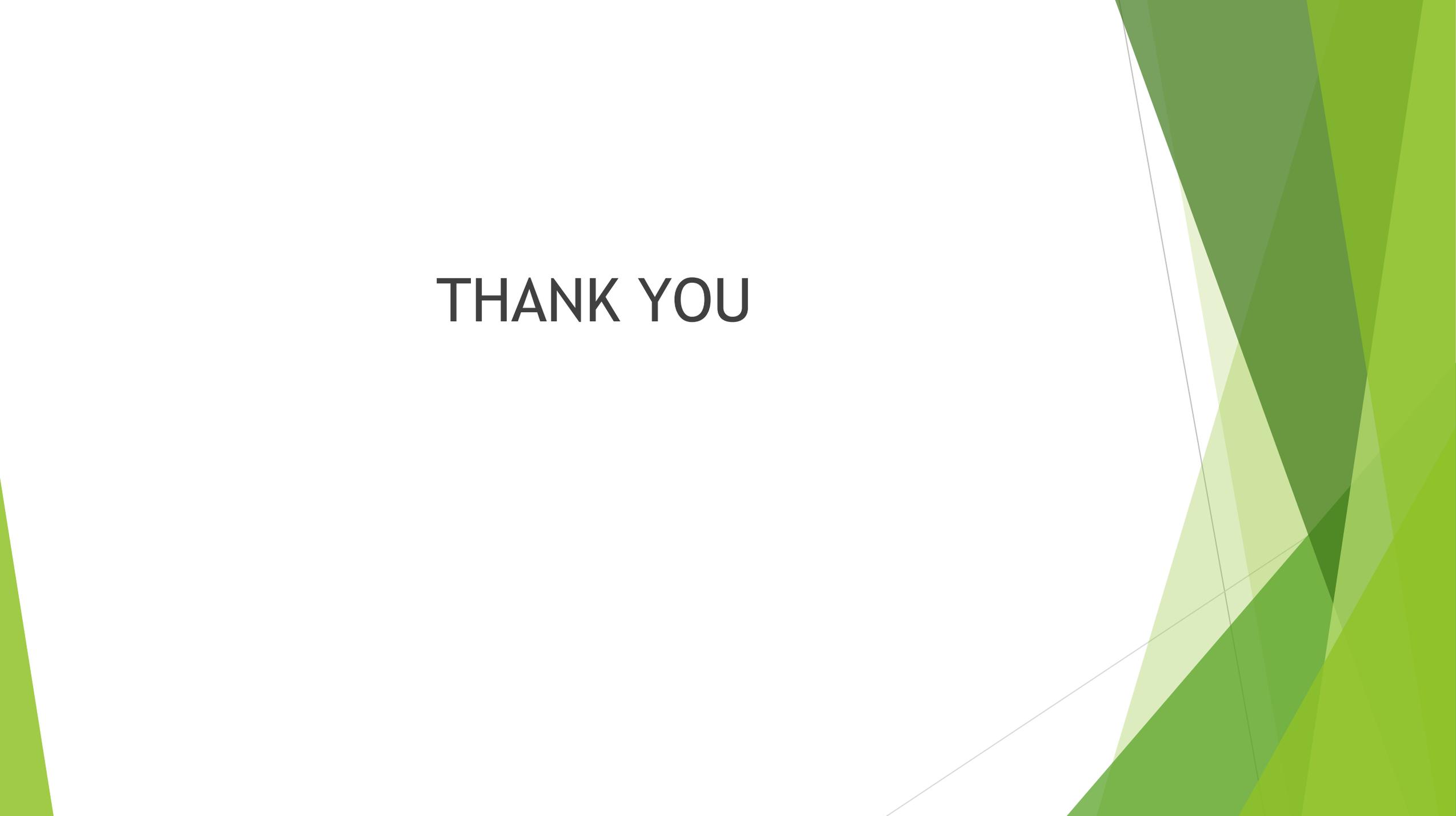
# The Way Forward

- ▶ The Amended PDP will:
- ▶ recognise clean/RE as an effective means of addressing Climate Change and ↓nat'l levels of GHG emissions.
- ▶ Identify appropriate locations for RE-related infrastructure & establish criteria for the development of major RE projects.
- ▶ Promote development of RE industry as a means for realizing a GE, recognizing the potential for creating new jobs, increasing productivity, and realizing positive health benefits.
- ▶ Allow for dual land uses where RE is combined with another compatible use such as agriculture, based on appropriate criteria to ensure the integrity of both uses as required.

# CONCLUSION

- ▶ TCDPO is excited about the role it will play in assisting Barbados in obtaining economic and social benefits of shifting electricity generation to clean, climate-friendly, renewables generation.

**THANK YOU**

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the frame, creating a modern, layered effect against the white background.