## Huawei Digital Power Building a Low-Carbon Smart Society

## HUAWEI

### Low-Carbon and Digitalization, 2 for sure trends in coming 30 years

- 136 nations set timeline for zero carbon
- Germany go 100% green energy by 2035
- EU stop sell Fuel Car By 2035, include Hybrid Electricity consumption in energy will increase from 21% to 51%
- By 2050, renewable energy in electricity will increase from today's 25% to 90%

#### Low-Carbon



### Digitalization

- . Digital World
- All industries are migrating to the cloud
  - By 2025, 65% of IT applications will be in cloud
  - Internet traffic raise **40%** due to pandemic
  - The cloud market in LATAM will reach about US\$22 billion by 2025



### **Energy Transition is Vital for Carbon Emissions Reduction**



### **Incentive Policies for Solar PV are Widely Adopted**

Clear Renewable Energy Target, Net Metering or Net Billing, Tax Exemption or Deduction

🔀 Jamaica

- 60% reduction in GHG emissions by 2030
- 🚔 Feed In Tariff
- National fund for solar PV Utility project

Exempts from General Consumption Tax and Import Duty
National Housing Trust PV loans

### Trinidad & Tobago

30% reduction in GHG emissions by 2030
20% generation from renewables by 2030

#### No Metering program available

- Import Duty Exemptions
- O-Rated VAT

- Wear and Tear Allowance on 150% of expenditure
- Tax Credit for Solar water heater



### The Bahamas

30% renewables in the energy mix by 203330% reduction in GHG emissions by 2030



Connect maximum up to 150 kW Each island of The Bahamas have different capacity limit.

• No current tax incentives

### Focusing on Carbon Neutrality, Huawei Digital Power is established



### Huawei Digital Power Strategy

Integrate digital and power electronics technologies to drive energy revolution for a better, greener future.



### Industry-Leading Smart PV and Storage Solutions for All-Scenario



### Over 8.5 GW Smart PV Solution Application in LATAM (Global 210GW+)



# Business Model: National Unified Plan, Coordinated O&M, and Formed a Joint Force

### Government

Promote "decarbonization", promote local industry development, and improve people's well-being.

### Investors

Invest in the national new energy industry,

continue to operate, and gain profits

### EPC

Collaborative planning and design

### **Construction & operation Companies**

Responsible for construction & operation of power plants in each region

Supplier

Consult Partners

High Level Planning

O&M partners Auxiliary operation service **Financing Bank** 

**Financing Services** 



### Necessity and Benefit Analysis of Distributed Photovoltaic Popularization



Utilize rooftops for PV to monetize and reduce



#### Electrify Remote Community

Solar PV + Storage can
provide solution for remote
community electrification



#### Small Residential Rooftop

Capacity	5KW
CAPEX	5139 USD
Annual Power Generation	9.48 KWh
Annual Savings	1387 USD
Investment IRR	12%
Break Even Period	4 Years
Lifecycle Savings	27,700 USD

#### Reduce Carbon Emission

 Solar PV is in line with the global consensus of

#### Carbon neutrality.



#### Create Work Opportunity

- Build a local new energy industry
- Promote new job opportunities



#### **Social Benefit Analysis**

Government	Build a green and poetic city, increase the share of renewable	
	energy consumption, and reduce carbon emissions	
Investor	Energize rooftop resources, and participate in comprehensive	
	services such as the development, utilization, and operation of	
	distributed new energy resources through energy transformation.	
Enterprises Residents	Enjoy clean energy power, reduce power consumption costs,	
	and increase the proportion of green power consumption.	

### **Examples of PV Scenarios for different applications**





### **Agricultural PV**



### **PV Street Lamp**



**Roadside PV** 





#### Warehouse PV



#### **PV Train Station**



### Parking Pay Machine PV



Source: Support for the Production and Use of Electricity from Renewable Energy Sources in Strafanspochen, Germany

**Qinghai Santara utility-scale PV project** 

### **Huawei smart PV solution**

Contributes to successful grid connection of the world's largest single-site PV station

The total AC capacity is **2.2 GW**, including 1.6 GW AC from Huawei smart string inverters.

**Smart O&M** – Smart I-V curve diagnosis 4.0, taking only 20 mins to scan a 100MW PV plant

**Grid forming** – Weak grid support (SCR down to 1.2), supporting stable operation in all-scenario grid scenarios

Safe & reliable – TUV verified: Cumulative failure rate < 0.6‰

Inverter SUN2000-175KTL-H0, Grid connection time: September 30, 2020

\* The world's first ultra-high voltage power line that delivers 100% renewable energy over long distances

\* The world's largest single-site renewable energy project with the shortest construction time



- Project: Monte Plata Phase I, Dominican Republic
- Capacity: 33.3 MW, SUN2000-30KTL-A
- Full Power Operation (SCR 1.2 ~ 5)
- Active THD inhibition

Multi-MPPTs Fix Ground Mounted IP65



### Chile Nuevo Pudahuel Airport PV project

Capacity: 830 KWp Yearly Generation : 105 GWh

# One cabinet replaced six cabinets, reducing OPEX by 20% (\$2154)/year and carbon emissions by 8 tons/year @ Hangzhou





In the past 30 years, Huawei helped to build a fully connected intelligent world;

In coming 30 years, Huawei will help to build a Low Carbon Smart Society.

Thank you !

Building a Connected Intelligent World