



# CORDILLERA ENERGY DEVELOPMENT: CAR AS A MAJOR HYDROPOWER PRODUCER

Dir. Juan B. Ngalob  
NEDA-CAR

# *PRESENTATION OUTLINE*

- *Concept of the Key Focus Area:  
A CAR RDP Component***
- *Regional Power Situation***
- *Development Challenges &  
Opportunities***
- *Development Prospects***
- *Regional Specific Concerns/  
Issues***

# ***Concept of the Key Focus Area: A CAR RDP Component***

- ❖ **Cordillera is envisioned to be a major hydropower producer in Northern Luzon.**
- ❖ **Car's hydropower potential is estimated at 3,580 mw or 27% of the country's potential.**
- ❖ **Hydropower development in CAR shall focus on mini and small run-of-river type hydro projects for being socially acceptable and environment- friendly.**

# CAR'S Hydropower Potential

Province	Estimated Capacity (MW)
Abra	671
Apayao	1,328
Benguet	535
Ifugao	154
Kalinga	602
Mt. Province	297
CAR Total	3,587

# ***Regional Power Situation***

- ❖ At present CAR's hydropower generation is merely 208 MW (100 MW Binga Dam, 70 MW Bakun HEP, & 14 mini hydros; excluding inoperational 75 MW Ambuklao Dam).
- ❖ As watershed cradle of the North, CAR provides water to run the 360 MW Magat Dam in Isabela & the 345 MW San Roque Dam in Pangasinan.

# ***Regional Power Situation***

- ❖ The proposed Palsiguan Dam with irrigation component in Ilocos Norte & Ilocos Sur will divert water from Tineg, Abra
- ❖ CAR's annual peak demand is 107.5 MW (only half of its power generation).

<b>Province</b>	<b>Demand (MW)</b>
<b>Abra</b>	<b>7.1</b>
<b>Benguet/Baguio</b>	<b>92.3</b>
<b>Ifugao</b>	<b>1.9</b>
<b>Kalinga/ Apayao</b>	<b>3.1</b>
<b>Mt. Province</b>	<b>2.9</b>

# ***Regional Power Situation***

- ❖ In terms of rural electrification, all CAR's poblaciones were energized since 1997.
- ❖ At the barangay level, 96% or 1,127 out of 1,172 barangays covered. Among the provinces, Abra & Mt. Province are 100% covered while Benguet, Ifugao & Kalinga are above 90%, Apayao is last with 76 %.
- ❖ At the household level, 90% now enjoys the benefits of electricity.
- ❖ Off-grid barangays are served by micro hydro projects, solar home system or diesel generators.

# Rural Electrification Status

as of June 2008

Province (# Mun.)	Barangays			%
	Total	Served	Unserved	Coverage
Abra (27)	303	303	0	100
Apayao (7)	131	100	31	76.33
Benguet(13)	140	136	4	97.14
Ifugao (11)	175	173	2	98.85
Kalinga (8)	150	142	8	94.67
Mt. Prov.(10)	144	144	0	100
Baguio (1)	129	129	0	100
<b>CAR (77)</b>	<b>1,172</b>	<b>1,127</b>	<b>45</b>	<b>96.16</b>

# ***Development Challenges & Opportunities***

- ❖ **Cordillera remains to be potentially rich in power.**
- ❖ **DOE predicts that Luzon's power requirement would increase from 8,302 MW in Year 2006 to a critical level of 9,721 MW by Year 2010 which requires additional power sources.**
- ❖ **This could be a key opportunity for CAR to develop its hydropower potentials. When developed would translate into savings from imported fuel.**

# ***Development Challenges & Opportunities***

- ❖ **Serves as impetus for local development through revenue shares.**
- ❖ **Previously, CAR's hydropower development is constrained by issues on social acceptability among local residents due to past experiences.**

# ***Development Challenges & Opportunities***

- ❖ **Recently, through the DOE-assisted Cordillera Energy Producer Master Plan (CEPMP), which advocates the development of mini to small hydro projects through affected communities involvement, people through series of consultations were enlightened and became receptive.**
- ❖ **Development of these projects is proposed to be in collaboration with the affected LGUs & villages.**

# ***Development Prospects***

- ❖ **CEPMP primarily proposes the establishment of Local Power Corporations (LPC) with the LGUs, electric cooperatives, private sector & host communities as incorporators.**
- ❖ **This arrangement will optimize benefits for the LGUs & host communities more than those mandated by relevant laws.**
- ❖ **The LPC partners with an experienced power developer.**

# ***Region Specific-Issues/Concerns***

## **Legal Environment Concerns:**

- ❖ **The DOE Energy Regulation (ER) No. 1-94 financial benefit of one centavo per kWh generated should be updated into its current and real value considering inflation. Adjust to 0.5 % of the gross sales to reckon with the year 1994 percentage rate.**
- ❖ **Redefine “host community” to cover villages along the upstream or within the watershed area that financial benefits be shared as incentive for watershed sustainability.**

# ***Region Specific-Issues/Concerns***

## **Legal Environment:**

- ❖ **Direct remittance of ER No. 1-94 financial benefits to the host LGUs similar to national wealth tax.**
- ❖ **Push for the Renewable Energy Bill to provide incentive to the NRE developers**
- ❖ **Reduce the cap on systems losses & should not be subjected to VAT**
- ❖ **Review contracts of distribution utilities under “take or pay” terms**

# ***Region Specific-Issues/Concerns***

## **Infrastructure Concerns:**

- ❖ **CAR needs a transmission trunkline and fast track transmission expansion program and substation upgrading**
- ❖ **Allow franchises in transmission but excluding generation and distribution sectors**

## **Organizational Concerns**

- ❖ **Conversion of electric cooperatives to stock cooperatives.**

# ***Region Specific-Issues/Concerns***

## **Environment/ IEC Concerns:**

- ❖ **Education campaign on clean air, climate change, NRE, etc. (incorporate in curriculum)**
- ❖ **Bring consultations and energy literacy to the barangays with assistance of the academe, private sector & line agencies.**

AGYAMAN KAMI APO ...