

ENERGY REFORM IMPLEMENTATION AND OPPORTUNITIES OF INVESTMENT IN MEXICO

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REPRESENTATIVE IN EUROPE- ENERGY SUSTAINABILITY FUND

I. OVERVIEW OF THE ENERGY SECTOR

II. MEXICO'S ENERGY REFORM

III. INVESTMENT OPPORTUNITIES

IV. FINAL COMMENTS: CURRENT COLLABORATION

OVERVIEW OF THE ENERGY SECTOR

2014

119 million
inhabitants



406 cities



75% of the total
population is located in
cities



30.7 million vehicles using
petrol and diesel



2029

137 million
inhabitants

503 cities

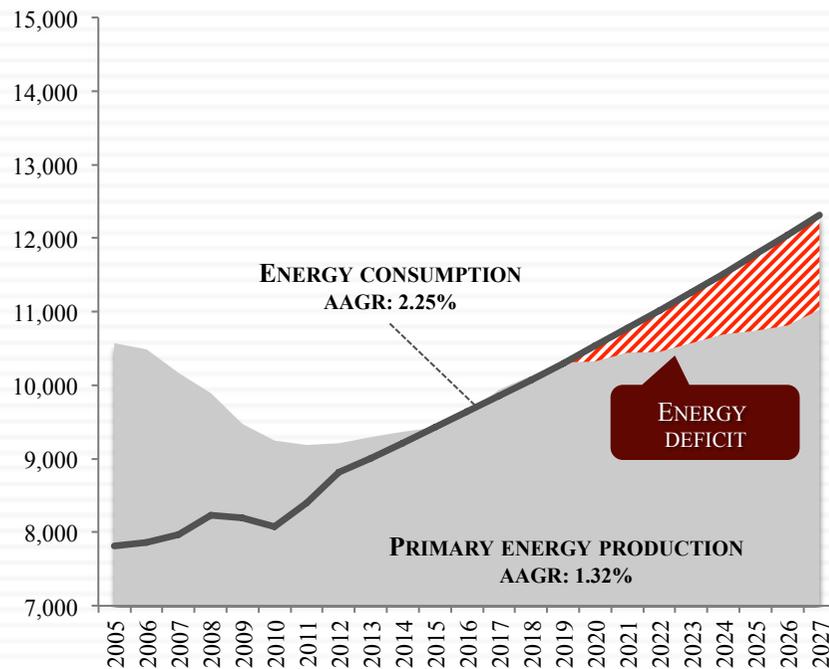
90 % of the total
population will be
located in cities

39.8 million vehicles will
use petrol and diesel

OVERVIEW OF THE ENERGY SECTOR

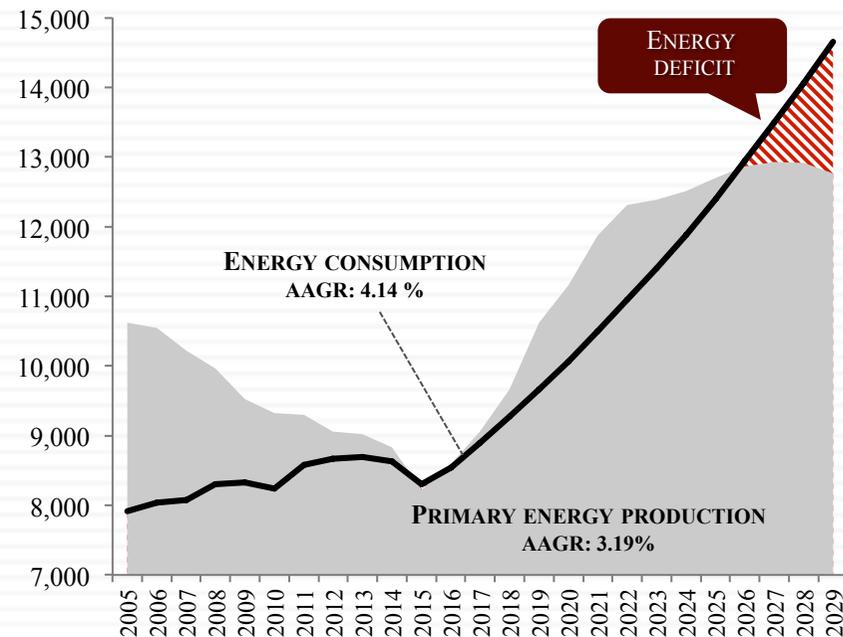
MEXICO: ENERGY PRODUCTION, CONSUMPTION AND ECONOMIC GROWTH (PETAJOULES)

2013: BEFORE ENERGY REFORM



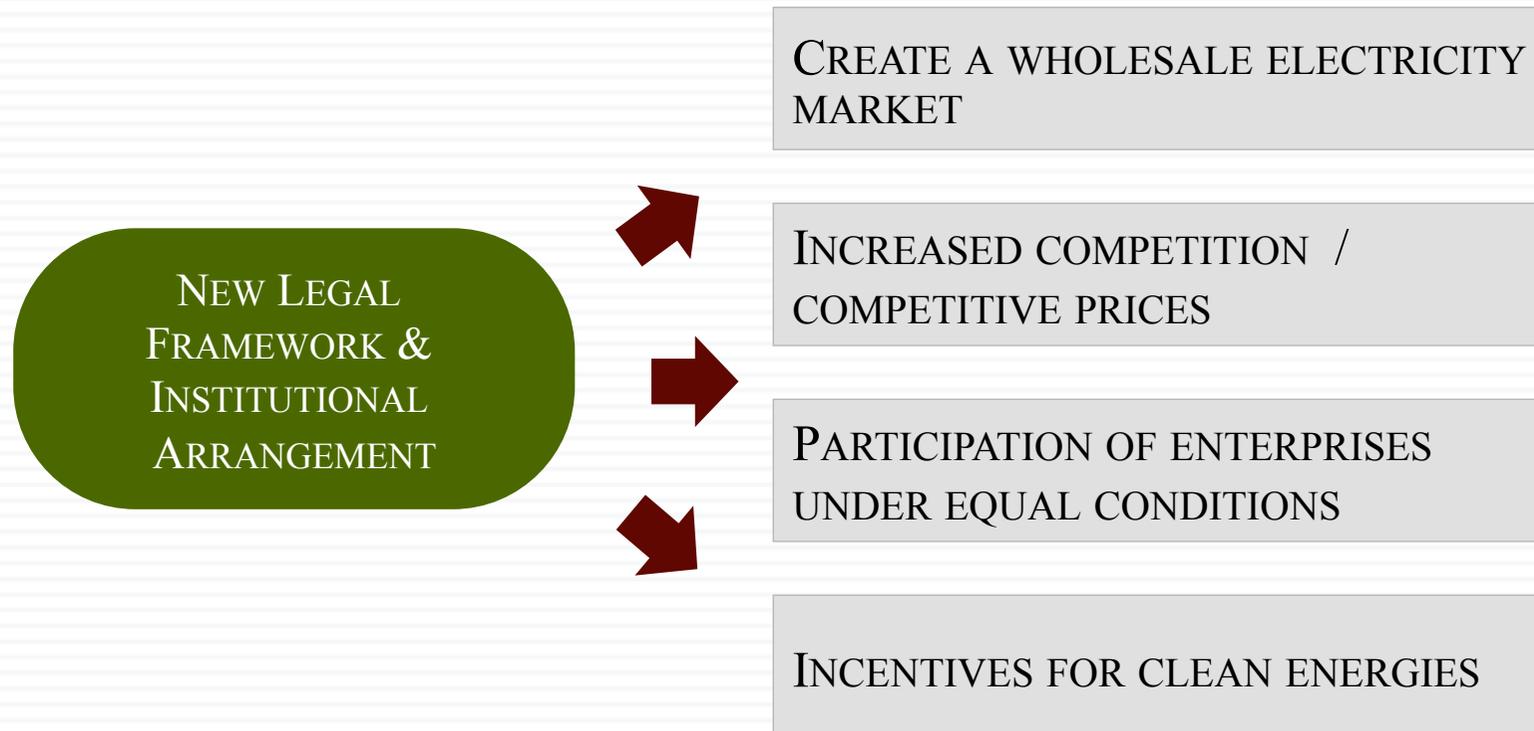
AAGR: ANNUAL AVERAGE GROWTH RATE 2015 -2027

2015: AFTER ENERGY REFORM



AAGR: ANNUAL AVERAGE GROWTH RATE 2015 -2029

MEXICO'S ENERGY REFORM ELECTRICITY SECTOR



MAIN MANDATES

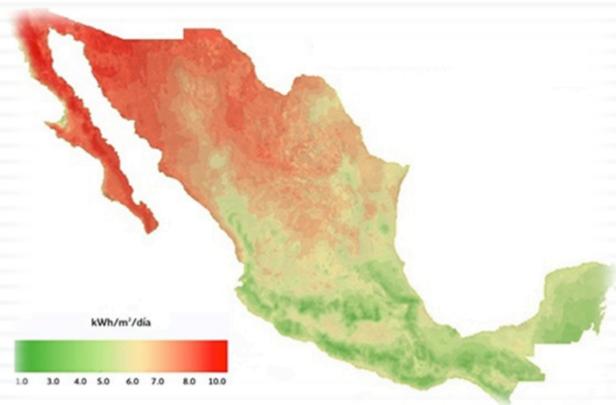
- TRANSITION TOWARDS THE SUSTAINABLE USE OF ENERGY
- GRADUAL INCREASE OF CLEAN ENERGY IN THE NATIONAL ENERGY GRID,
- REDUCTION IN THE CARBON FOOTPRINT OF THE ENERGY SECTOR
- ALIGNING THE MANDATE ON CLIMATE CHANGE AND THE ELECTRICAL INDUSTRY

PLANNING INSTRUMENTS (ADVISORY COUNCIL)

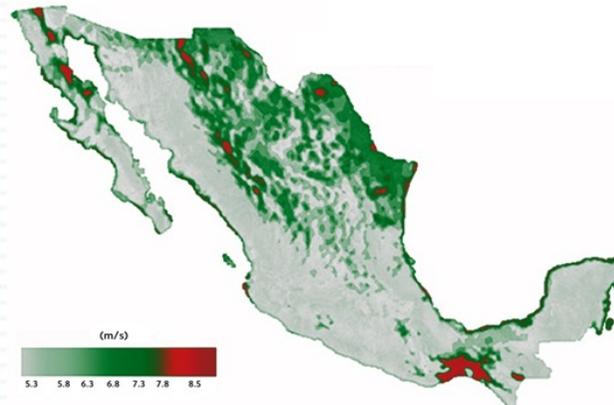
- TRANSITION STRATEGY TO PROMOTE THE USE OF CLEANER TECHNOLOGIES AND FUELS
- SPECIAL PROGRAM FOR THE ENERGY TRANSITION
- NATIONAL PROGRAM FOR SUSTAINABLE USE OF ENERGY.

MAPS OF RENEWABLE RESOURCES

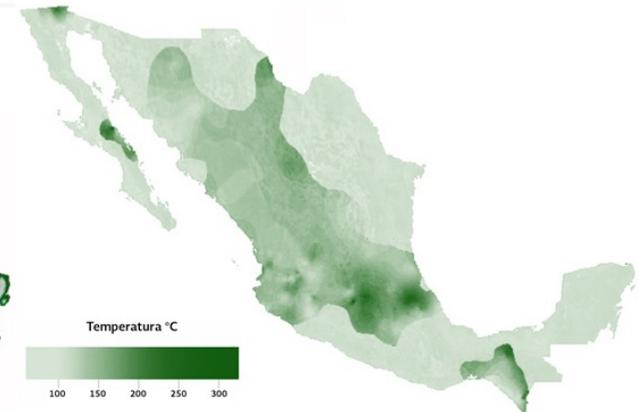
DIRECT IRRADIATION
DURING JUNE*



POWER DENSITY
80MTS DURING APR. (W/M²)**



GEOTHERMAL RESOURCES
(°C)***



* AVERAGE DAILY IRRADIATION IN MEXICO IS ABOUT 5.5 KWH/M²/D, AND CAN REACH VALUES HIGHER THAN 8.5KWH/M².

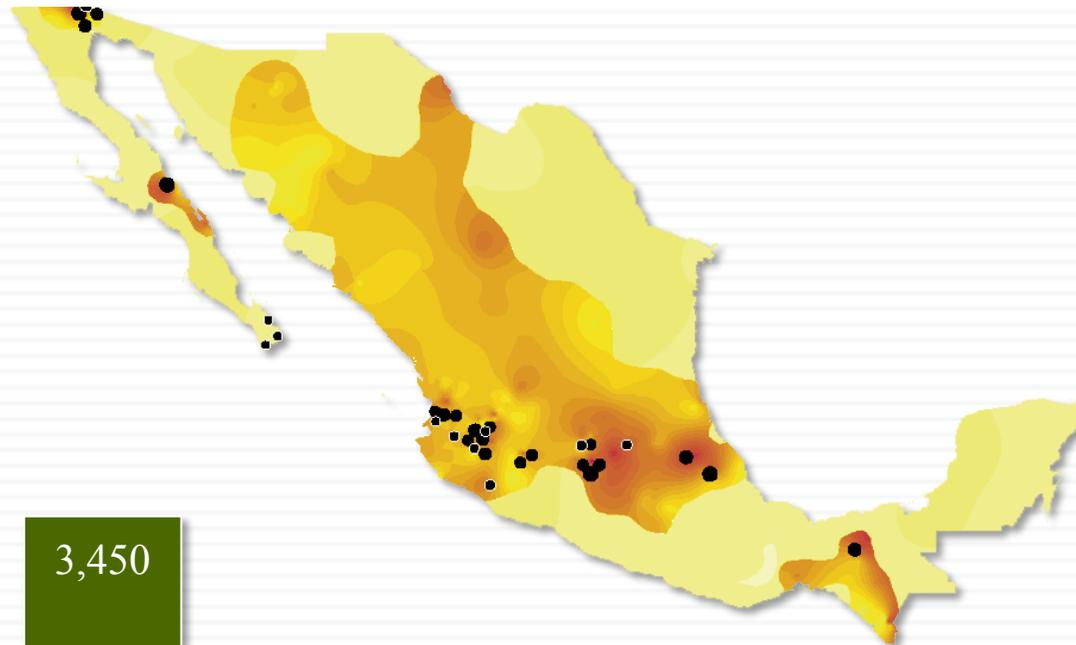
** STUDIES TO CHARACTERIZE THE WIND RESOURCE IN REGIONS OF THE ISTHMUS OF TEHUANTEPEC, THE PENINSULAS OF YUCATAN AND BAJA CALIFORNIA, AND THE NORTHERN REGION OF THE GULF OF MEXICO.

*** GEOTHERMAL POTENTIAL BASED ON THE CENSUS OF MORE THAN 1,300 HOT SPOTS ESTIMATED BY THE FEDERAL ELECTRICITY COMMISSION.

INVESTMENT OPPORTUNITIES

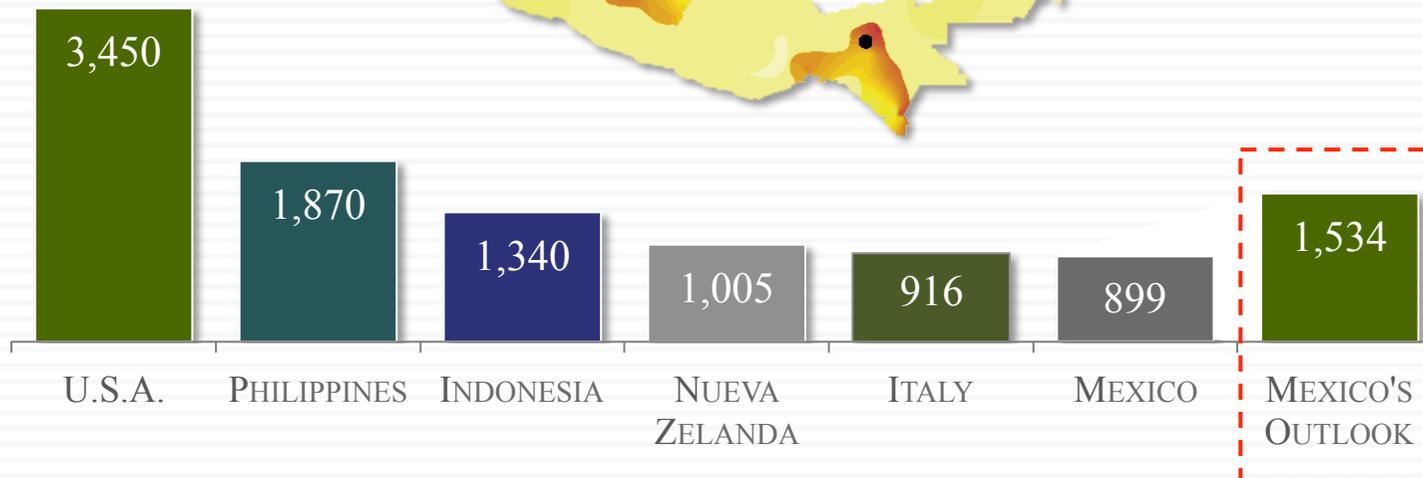
GRADUAL PENETRATION OF RENEWABLES TO THE SYSTEM

CLEAN POWER GENERATION: GEOTHERMAL



PROVEN	286 MW
PROBABLE	5,730 MW
POSSIBLE	7,422 MW

TOTAL: 13.4 GW



- 15 EXPLORATION'S PERMITS (508 MW)
- 2 EXPLORATION'S CONCESSIONS (50 MW)
- 77 MW IN ADDITION TO THE 4 CFE'S FIELD
- 11 APPLICATIONS IN PROCESS

CLEAN POWER GENERATION: GEOTHERMAL

PROCESS FOR INVESTING



RECOGNITION
REGISTRATION FOR 8 MONTHS (SENER)



EXPLORATION
3 YEAR RENEWABLE PERMIT FOR AREAS
OF UP TO 150 KM²



EXPLOITATION
30 YEAR RENEWABLE CONCESSIONS FOR
AREAS OF UP TO 150 KM²

DRIVERS

- NEW LEGAL FRAMEWORK (GEOTHERMAL ENERGY ACT)
- WHOLESALE ELECTRICITY MARKET
- FINANCIAL RISK MITIGATION MECHANISM
- CLEAN ENERGY CERTIFICATES

INVESTMENT OPPORTUNITIES ELECTRICITY SECTOR: 116 BILLION DOLLARS

GENERATION ADDITIONAL
CAPACITY
60 GW (2015-2029)

NEW TRANSMISSION LINES:
24,600 KM (2015-2029)

WHOLESALE ELECTRICITY MARKET

ELECTRICITY AUCTIONS
(CLEAN ENERGY CERTIFICATES: 2018: 5 %; 2019: 5.8%)

ELECTRIC INTERCONNECTIONS WITH
NORTH AMERICA AND CENTRAL AMERICA

INTERCONNECTION OF BAJA CALIFORNIA
SYSTEM-NATIONAL SYSTEM

SMART GRIDS AND DISTRIBUTED GENERATION

INVESTMENT OPPORTUNITIES WHOLESALE ELECTRICITY MARKET

THE FOLLOWING SYSTEMS BEGAN OPERATIONS

- BAJA CALIFORNIA: JANUARY 27TH
- SISTEMA NACIONAL: JANUARY 29TH
- BAJA CALIFORNIA SUR: MARCH 23RD

PARTICIPATION (397 AVERAGE OF DAILY OFFERS)

- CFE / 183 PERMIT HOLDERS REPRESENTED BY CFE
- FENIX GROUP
- FISTERRA

TRANSPARENCY AND ADMINISTRATIVE FLEXIBILITY

- GREATER TRANSPARENCY IN GENERATION COSTS
- ESTABLISHMENT OF REFERENCE PRICES
- SIMPLIFICATION AND ADMINISTRATIVE FLEXIBILITY

INVESTMENT OPPORTUNITIES LONG TERM ELECTRICITY AUCTION (LTEA)

1ST LTEA RESULTS (MAR 29TH, 2016)

- 11 WINNING COMPANIES WILL ADD 2,085 MW OF GENERATING CAPACITY (81% SOLAR AND 19% WIND)
- CLEAN GENERATION WILL INCREASE 1.9%
- ESTIMATED INVESTMENT: 2.6 BILLION USD OVER THE NEXT 3 YEARS
- 7 STATES BENEFIT FROM INVESTMENT (AGS, BCS, COAH, GTO, JAL, TAMP, & YUC.)
- AVERAGE PRICE: 47.78 USD FOR A PACKAGE OF 1 MWH AND 1 CLEAN ENERGY CERTIFICATE:
 - WIND: 55.39 USD
 - SOLAR: 45.15 USD

2ND LTEA

- TRANSPARENCY THROUGHOUT ALL PROCESS ([HTTP://WWW.CENACE.GOB.MX](http://www.cenace.gob.mx))
- PROMOTE NEW INVESTMENTS IN CLEAN ENERGY GENERATION
- BEST PRACTICES FROM 1ST ELECTRICITY AUCTION
- CALL FOR TENDER: APRIL 29TH, 2016
- AWARDING: SEP. 30TH, 2016

INVESTMENT OPPORTUNITIES TRANSMISSION LINES

1ST BID

WITH PRIVATE INVESTMENT

- ISTMO DE TEHUANTEPEC TO THE CENTER OF THE COUNTRY
- INVESTMENT: 1.2 BILLION USD
- HIGH-VOLTAGE DIRECT-CURRENT 600 LINEAR KM
- PRIVATE INVESTORS CAN COMPETE

2ND BID

INTERCONNECTION OF BAJA CALIFORNIA SYSTEM-
NATIONAL SYSTEM

- INCLUSION OF THE PROJECT:
PRODESEN 2016-2030
- ESTIMATED INVESTMENT: 1.2
BILLION OF USD
- CALL FOR TENDER AND
AWARDING: 2017
- STARTING OF OPERATIONS:
APRIL 2021

THANK YOU
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