

ACCIONA Energy
Global leader in sustainability



Index

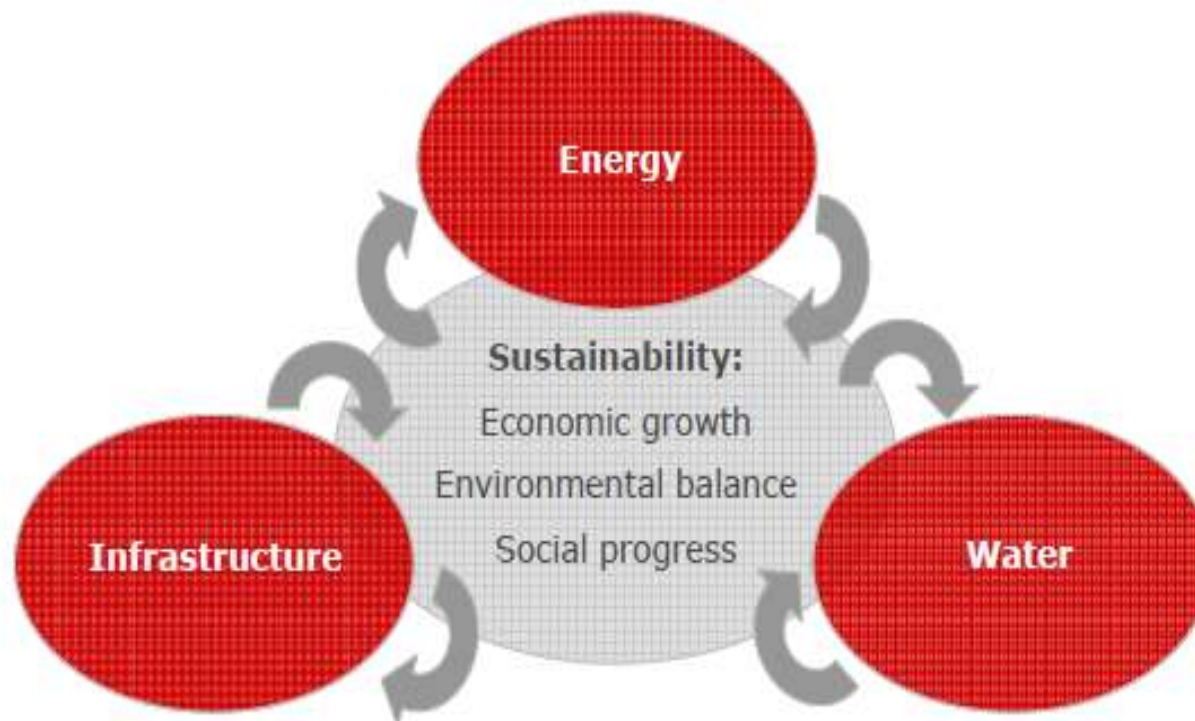
- 1. ACCIONA, pioneers in development and sustainability**
 - 2. ACCIONA Energy, leader in renewable energies**
 - 2.1. Wind power business**
 - 2.2. Other renewable technologies**
 - 2.3. Sustainability**
 - 3. Acciona Energy Korea**
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ACCIONA Group

- **Leading** corporation in the development, promotion and management of **infrastructures and services aimed at sustainable development and social well-being**
- A team of **over 35,000 people** in 32 countries on 5 continents
- **A solid economic position:** (Data at 31.12.2008)
 - EBITDA: 2,827 M€ (+100.9%)
 - Turnover: 12,665 M€ (+59.3%)
 - Operating result: 1,678 M€ (+88.6%)
- **Quoted on major stock indices:** IBEX-35, Dow Jones Sustainability World Index (DSJI World), Dow Jones Stoxx Sustainability Index

Development and sustainability, key corporate strategies

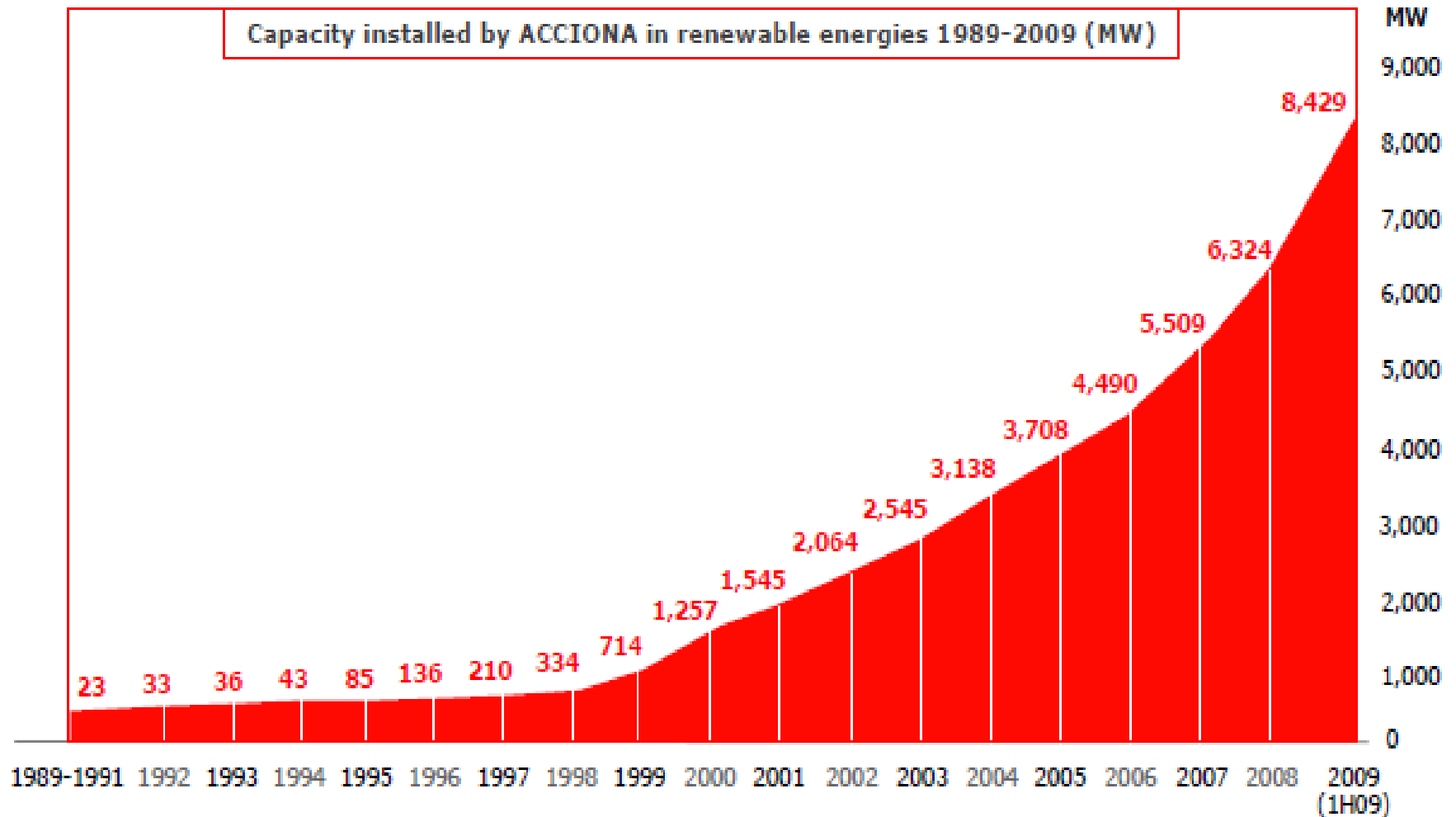
A business model based on three pillars



A company with a lot to offer to its clients



The largest experience in the sector



The only company with leadership in all the most viable renewables



Data at 30.06.2009. The company owns an additional 100 MW in cogeneration.
133.7 MW from Endesa in escrow not included.

Economic Data (31. 12. 2008)

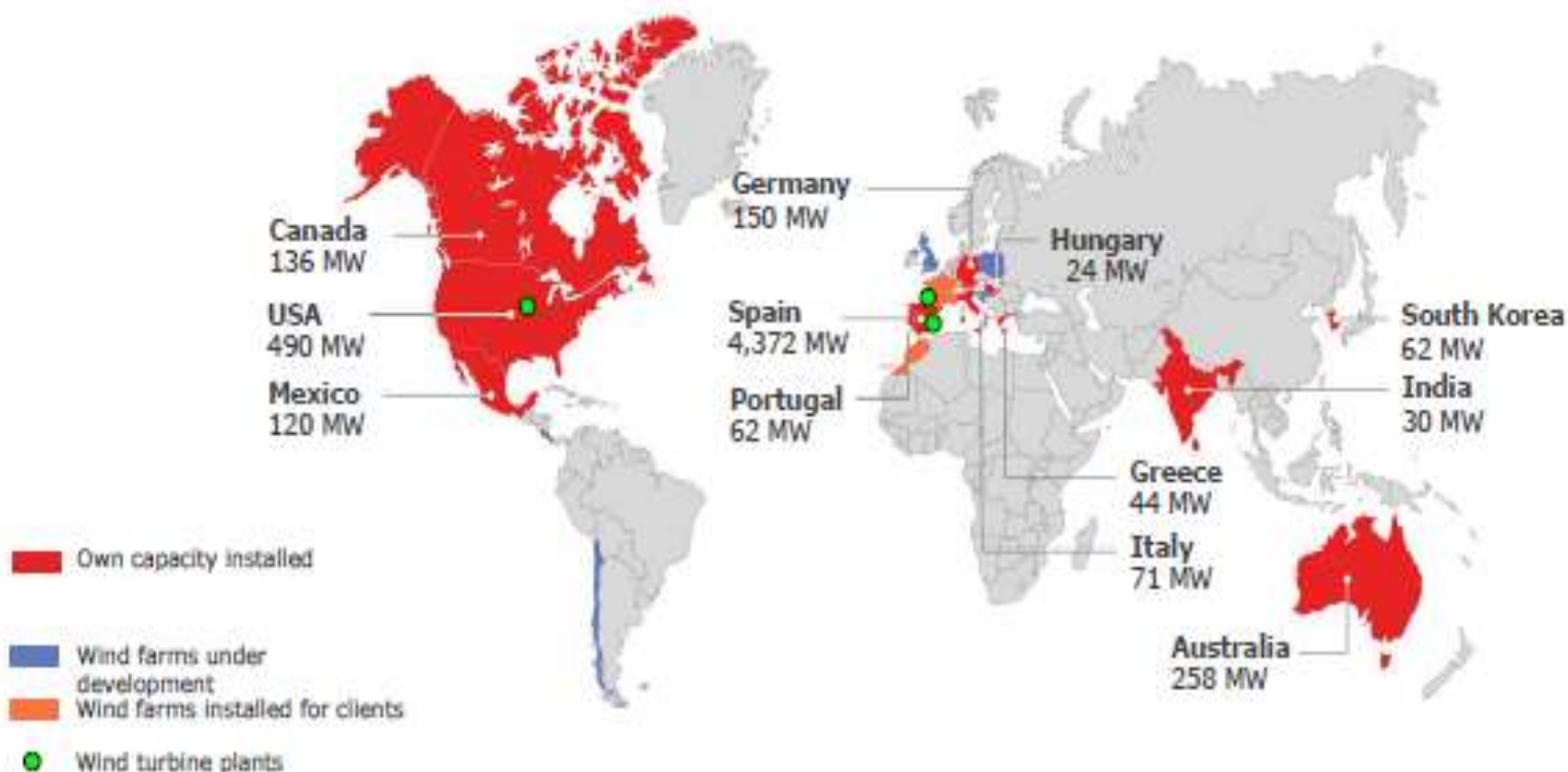
ACCIONA Energy Figures (millions of euros)

Turnover  1,784 (+63.2%)

EBITDA  589 (+50.3%)

EBT  187 (+59.1%)

Worldwide wind energy implementation (Data at 30.06.2009) (MW)



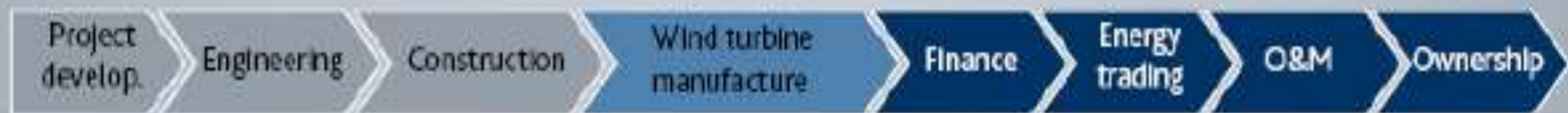
Total capacity : 7,291 MW

Own capacity: 5,819 MW

Attributable capacity: 4,953 MW

Vertical Integration

Value chain

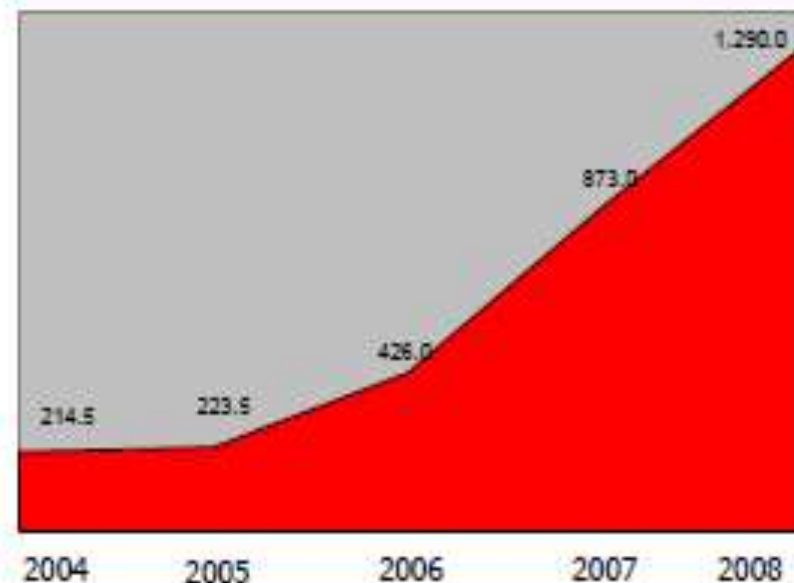


Activities

ACCIONA Windpower: wind turbines designed in-house

- **ACCIONA Windpower** designs and produces robust and reliable wind turbines
- **Three plants** in strategic markets: Spain (2) and USA
- **Capacity:** 2,025 MW/year
- In the **world top 10** in just four years
- **Models:** 1.5 MW and 3.0 MW
- **Blades** designed and made with our technology
- **Strategy:**
 - Control of the value chain
 - Diversification of supplier risk
 - Design to optimize performance

MW assembled by AWP 2004 - 2008







Cathedral Rocks wind park (66 MW), on the South coast of Australia



AW-1500 wind turbines at the 48 MW Moncayuelo wind park (Spain)



Installation of the first AW-3000 wind turbine in Navarre, Spain in October 2008

Concentrating solar power

OPERATIONAL PLANT IN THE UNITED STATES

- **Nevada Solar One**, near Boulder City (Nevada)
- **64 MW** (the biggest built in the world in 18 years)
- **345 acre** surface area
- **47.5 linear miles** of solar trough collectors
- An **investment** of **266 million US\$**
- Connected to the grid in **June 2007**
- **ACCIONA**, the first **Spanish company** to have an operational plant using this technology



250 MW UNDER DEVELOPMENT IN SPAIN

- **Five 50 MW plants** in the regions of Extremadura and Andalusia
- **Operational:** Alvarado (Badajoz) (Since September 2009)
- **Under construction:** Alvarado (Badajoz), Palma del Río II (Córdoba) and Majadas (Cáceres)
- **In development:** Palma del Río I and Alvarado II
- Total estimated investment: **1,200 million €**

PLANTS FOR CLIENTS. Turnkey projects (Saguaro, Arizona; for APS)



ACCIONA's 'Nevada Solar One' CSP plant, in the Nevada Desert (USA)

Photovoltaic (PV) solar

THE BIGGEST PV PLANT IN THE WORLD

46 MWp plant operational in Amareleja (Portugal)

- 2,520 Buskil K18 **trackers** (141 m² and 21 kWp)
- 262,080 photovoltaic **modules**
- 620 **acres surface area**
- Clean electricity for **30,000 homes**
- **Investment of 261 million €**
- **Mitsubishi Corp.** has taken a 34% stake (March 09)



TOTAL 115 MWp INSTALLED

- **67 MWp for other companies** and 48 MWp own
- 20 plants with a capacity of over 1 MWp
- 18 *solar gardens* (61.5 MWp) with 3,500 clients who have jointly invested 456 million €
- Development and construction of plants for clients



Biomass in Spain

THREE OPERATIONAL PLANTS (33 MW)

Sangüesa (Navarre): 25 MW

- Operational since 2002
- Converts 160,000 tonnes of straw into 200 GWh/year
- Production equivalent to demand of 60,000 homes

Two 4 MW plants

7 PROJECTS UNDER CONSTRUCTION AND DEVELOPMENT

- 32 MW under construction
- 82 MW in development



Biofuels: Biodiesel and bioethanol plants in Spain

BIODIESEL

- 270,000 tonnes total production capacity
- Plant in the Port of Bilbao: 200,000 t. (at 80%)
- Plant in Caparroso (Navarre): 70,000 t. (at 100%)
- Raw material: First-use vegetable oils
- Homologated quality, European Standard EN-14214

BIOETHANOL (Spain)

- 26,000-tonnes plant in Alcázar de S. Juan (C. Real)
- Raw material: wine surplus alcohol
- 50% owned

ACCIONA BIOFUEL SERVICE STATION

- Pioneer in Spain, with B-30 and E-85 fuel
- Prepared for the future sale of hydrogen



Hydropower in Spain

- ACCIONA-owned installed capacity: **910 MW**
 - 78 hydropower stations
 - Wide range of capacities (<1 MW – 89 MW)
 - Located in six Spanish regions (mainly in Aragon, Navarre, Catalonia and Cantabria)



Renewable Energies Control Center

- The first in Spain and second in the world per number of facilities operated
- Control over 5,000 wind turbines in over 200 wind parks
- It also supervises facilities in other renewables as well as power substations
- Permanent service - 24/7, 365 days



The renewable energies control center at ACCIONA Energy's headquarters

Innovation: A commitment to technology



- **Clean hydrogen:** produced by electrolysis through wind power
- **More efficient wind turbines:** improvements in control, grid connection, blades, steel and concrete towers , offshore application
- **Quality biofuels:** new energy crops, research into raw materials, field tests, 2nd generation and Algae.
- **Offshore wind:** technology to develop feasible deep-water wind projects and possible integration with other marine renewable.
- **Electric Car:** technology to develop Grid2Grid and electric refueling stations
- **Solar PV:** Developing and testing new modules, controls and storage systems.
- **CSP:** Developing technology for thermal storage and reducing overall Balance of Plant Cost. New processes.

Location

- Acciona's 1st landmark project in Korea (2009)
- Located at YeongYang & YeongDuk Counties in the eastern part of Korea.



Project Overview

- Acciona's 1st Korean wind farm with 2nd largest generation capacity (with grid connection) in Korea
-
- Capacity : 61.5MW
(1.5MW x 41 turbines)
 - WTGs : AW-77 GLII
 - Tower : DongKuk S&C
 - Developer : Acciona Energy Korea
 - SPC : YYWPC
 - Constructor : DongKuk (Civil)
Hyosung (Electric)
 - Construction Period : Sep 2007 – Dec 2009
 - Transmission Line : 154KV
 - Currently finalizing civil works







Wind Power Generation Training Course

YYWF provides O/M training course 2 times every year(3 weeks)

- About 150 trainee
- General study for wind power
- General training, Safety & Equipments Training, On-the-spot Study, Evaluation, etc.

- **1st Training course
(Oct. 2008)**

- Venue: Andong GeonDong Univ.
- 34 persons

- **2nd Training course
(May 2009)**

- Venue: YeongYang Assembly Hall
- 47 persons

- **3rd Training course
(Nov. 2009)**

- Venue: YeongDuk Renewable Energy Exhibition Center
- 35 persons



Acciona Energy Korea

Wind
Power
Generation

2009년도 상반기 <Acciona Energy 풍력발전일반 기술교육> 참가자 모집

1. 사업개요

신재생에너지 전문기업인 스페인 최대 에너지 회사인 Acciona Energia는 풍력 발전, 태양광 발전 분야의 최고 기술 전문기업으로 인정받고 있습니다. 이에 국내 풍력 발전사업 관련업체의 기술향상을 위하여 교육과정을 개설하고 있습니다. 교육기간 1주일간, 교육장소 1곳, 교육대상 10명, 교육비용 무료입니다. 교육기간 동안 교육장소로 이동하는 교통비를 제외한 교육비용은 없습니다. 교육기간 동안 교육장소로 이동하는 교통비를 제외한 교육비용은 없습니다.

2. 교육대상

- 교육기간 : 2009. 6. 11(월) ~ 17(일) / 7일
- 교육장소 : 경상남도 통영시 통영시청 1층 1층 (통영시청 1층 1층)
- 교육대상 : 일반인
- 교육비용 : 무료
- 교육장소 : 통영시청 1층 1층 (통영시청 1층 1층)
- 교육대상 : 일반인
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- 교육장소 : 통영시청 1층 1층 (통영시청 1층 1층)
- 교육대상 : 일반인
- 교육비용 : 무료

3. 신청자격

- 학력 : 고졸 이상
- 거주지역 : 경상남도 통영시 통영시청 1층 1층
- 교육비용 : 무료
- 교육장소 : 통영시청 1층 1층 (통영시청 1층 1층)
- 교육대상 : 일반인
- 교육비용 : 무료

4. 신청시 교부 및 접수

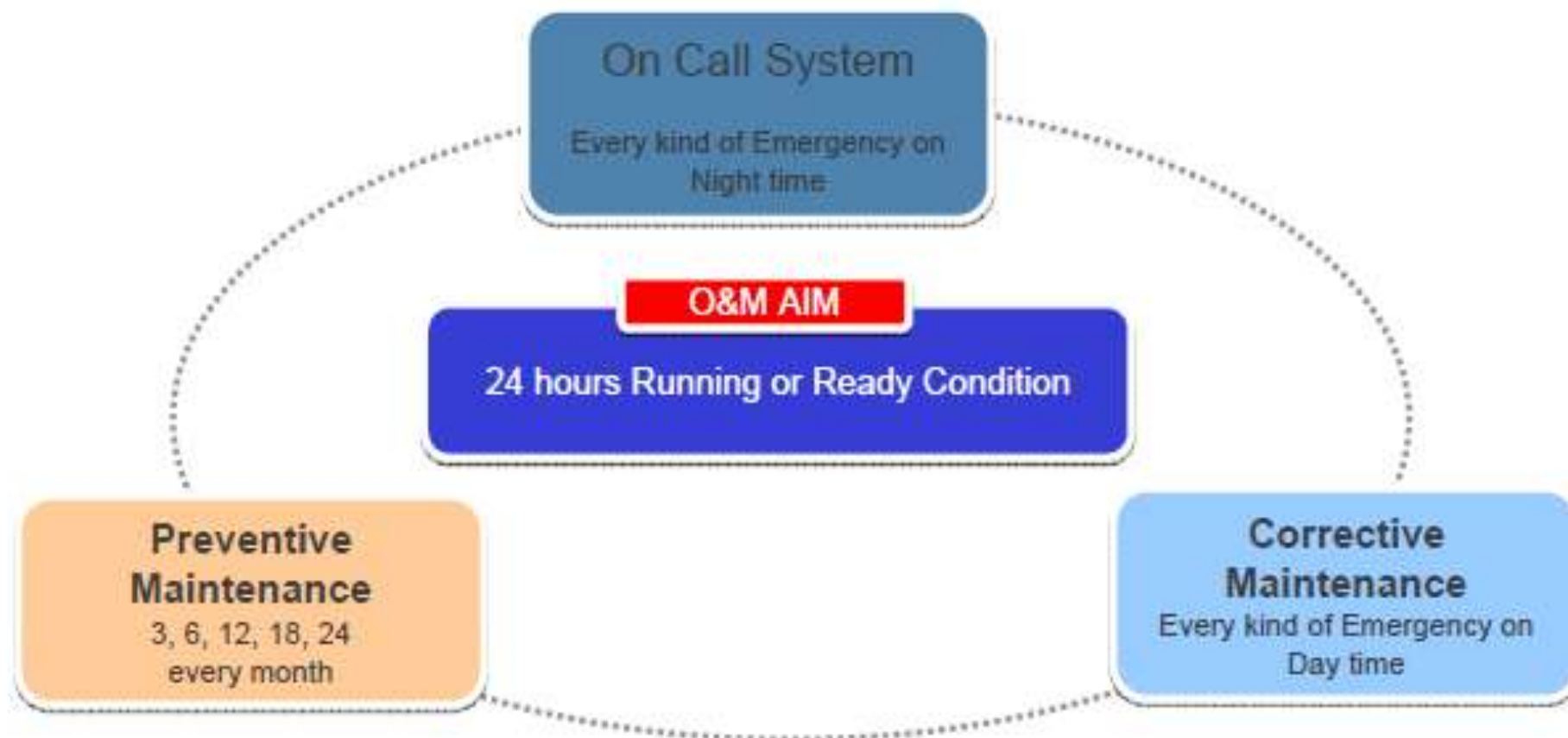
- 신청서 교부 : 2009. 6. 11(월) ~ 17(일) / 7일
- 신청서 접수 : 2009. 6. 11(월) ~ 17(일) / 7일
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- 신청서 접수 : 2009. 6. 11(월) ~ 17(일) / 7일

5. 기타 및 특이사항

- 교육비용 : 무료
- 교육장소 : 통영시청 1층 1층 (통영시청 1층 1층)
- 교육대상 : 일반인
- 교육비용 : 무료
- 교육장소 : 통영시청 1층 1층 (통영시청 1층 1층)
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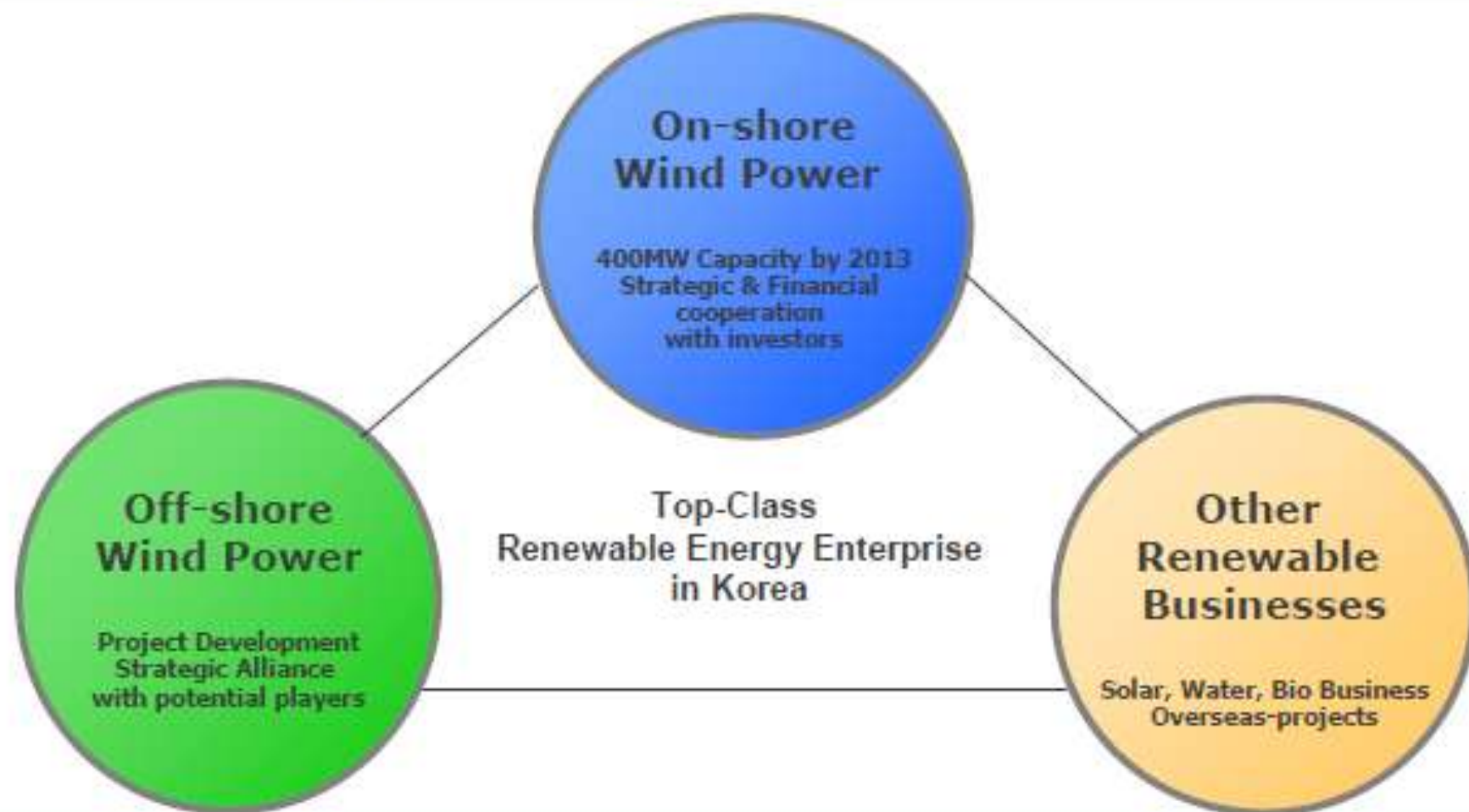
24 Hours Maintenance System

- Adopts 24 hours Maintenance through On Call System for night time emergency along with Preventive and Corrective Maintenance Activities on day time



Acciona aims to be Top-Class Renewable Energy Enterprise in Korea

- With sustainable business spheres on on-shore, will proceed to off-shore, and other promising renewable business areas.



Future Wind Projects : overview

- Basic surveys have been performed for new projects with more than 700MW potential capacity
- Capacity expected to rise up to 250MW (400MW including under construction) by 2013 that will cost approx. KRW 1 trillion (USD 800 million)

2010

2011

2012

2013

YY I (61.5MW)
YY II (34.5MW)

Constructed by 2012
(70MW)

Total Capacity to be developed
by 2013
: 250MW (will have constructed)
: 400MW (Including those under
construction)

Constructed by 2013
(90MW)

Under Construction
(150MW)

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