風力터빈타워 海外市場 進出事例

CS WIND CORP

Mar. 2011

World's most reliable wind tower solution provider

- Global Foot Print
- Capacity
- Snapshot of Deliveries
- Quality Management
- Solution by Packaged Service
- Complete Scope of On Time Delivery
- Tower Delivery Track Record
- Globalization
- Tower Manufacturing
- Facilities
- Feasibility Study on Ontario Tower Plant

Global Foot Print

Office
Plant

CS WIND CORP
(Cheonan, Korea/HQ)
- Sales & marketing
- Financing
- Sourcing
- R&D

CS WIND TECH
(Lianyungang, China / '06)
- Wind tower manufacturing
- Sales & marketing
- Regional supply & service

CS WIND CANADA
(Ontario, Canada / '11)
- Wind tower manufacturing

CS WIND VIETNAM
(Phu My, Vietnam / '03)
- Wind tower manufacturing
- Aluminum platform for wind tower

CS WIND Mexico
(Matamoros, Mexico / TBD)
- Wind tower manufacturing

CS WIND CORP
(Beijing, China / '09)
- CHINA office
- Sales & marketing

CS WIND TECH
(Shanghai, China / '10)
- Shanghai office
- Finance & Procurement

GPC (Global Production Center)

	Main Coverage
CSW VTN	• US West Coast • EURAF • APAC
CSW CHN	• US West Coast • CHINA • APAC
CSW CAN	• CANADA • Great Lakes offshore
CSW MEX	• US Central/Gulf offshore • Latin AMER

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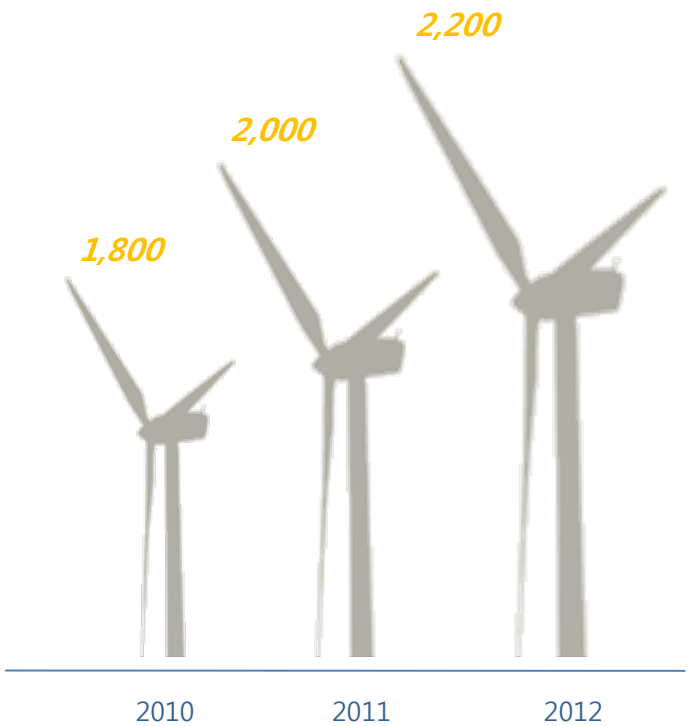
Capacity

Tower Production Capacity

Unit : tower by 106MT



Steel Plate Consumption

Unit : k MT

※ CS Wind Total Capacity

Snapshot of Deliveries

America : 80%

Dokie Ridge
Horizon Dickinson
Sues-Caribou 1
Summerside
Karvana
Port Alma
Alleco
Alliant MSA
Biglow Canyon
Biglow Ⅱ
Biglow Ⅲ
Blue Sky Greenfield
BP Master
Cedar Ridge
Cloud County
Papalotte Creek
Talbot
Duke Notrees
Elkhorn
EON 2009
Flat Rock
Hackberry
Harvest Wind
Horizon
Horizon Meadow
Horizon MSA
Horizon MSA
John Deer
Juancho Los Cocos Ⅲ
KIBBY
Kittitas Valley
Maple Ridge Ⅱ
Keenan
Marengo
NRG Elbow Creek
Pioneer Prairie
Prairie Star
PSE Whiskey Ridge
RES Westar
Sherbino Mesa
Skypower Fermeuse
Smokey Hill
Solano
Summit Windy Point
Twin Groves Ⅱ
Vame Various
White Hill
Wild Horse
Lower Snake River

Europe : 10%

ILN
Fohr
Sophien Magdelenen Hoog
Karvana
GYORKONY
Gyorkony
SDS & ILN
Sanko Catalca
La Fatarella
Griffin Forest
Toftedalsfjellet

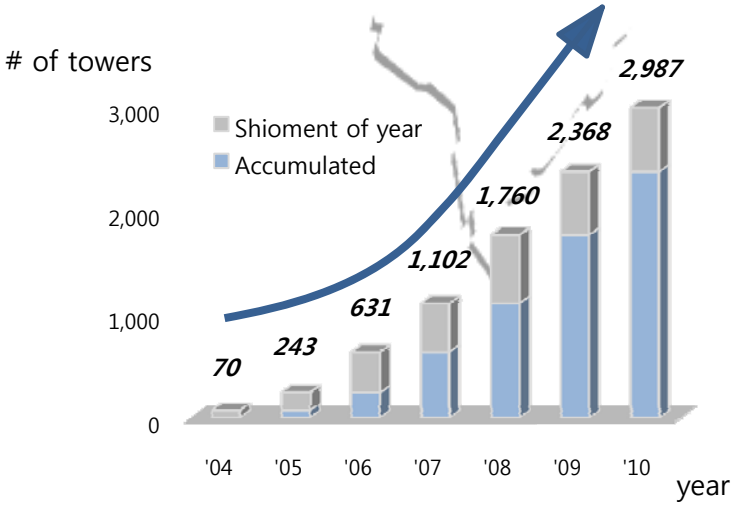
8 foundation

Chang Kong
Bangui Bay

Asia Pacific : 10%

ALINTA
EMU Dawns

Tararua
Te Apetiti



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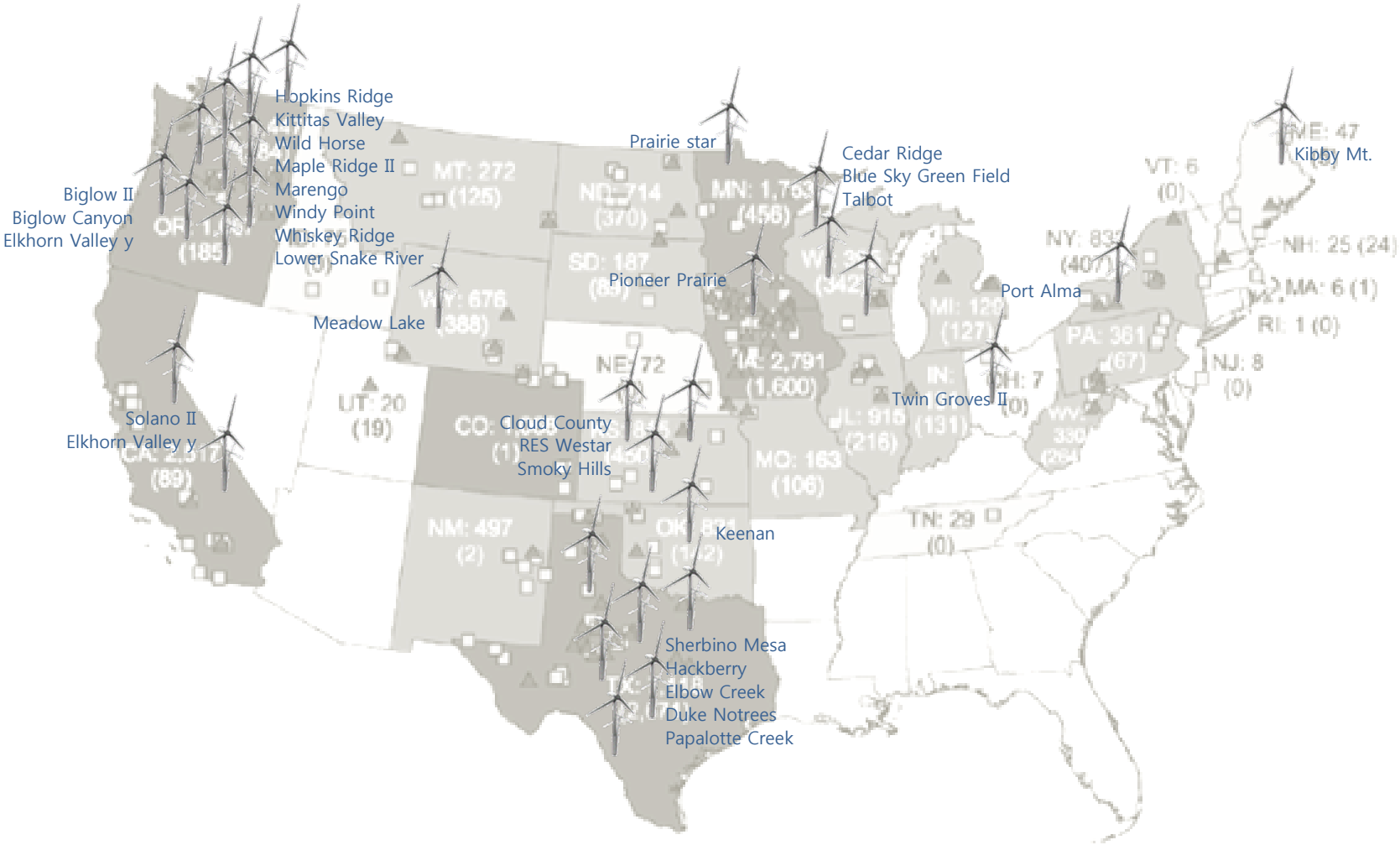
Snapshot of CSWind Towers in US



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Quality Management

QMS system

- Continuous improvement with
  - QMS structure
  - Control procedures
  - Responsibility & authorities
  - QIP & QAP
  - Inspection records
  - Statistical diagram
  - Immediate action
  - Improvement project
  - Meeting structure

  as a culture
- 12 KPIs management
- Management commitment

<DIN 18800-7>

<ISO 9001>

<ISO14001>

<OSHAS 18001>

<AISC>

"Quality is Our Pride"

- *Award of "Best Supplier" by Vestas with best assessment score of 3.8 out of 5.0 (Ave. 2.4)*
- *Assignment of sole "Global Supplier" by Siemens with best assessment score of 78 out of 100 (Ave. 60)*

Safety First

- Put the first priority the same as EHS
- No Compromising with BC People, Functions whatever / Firewall
- Train QS, WPS, PQR, ISO using Six Sigma Methodology

LEAN behavior

- Remove 7 Wastes by Lean thinking and Action Workout
- Try-storming with 90 projects by China /Vietnam employees
- Make habit to be disciplined and customer focus by continuous improvement,
  Lean Six Sigma AWO

Solution by Packaged Service

Integrated Global Supply Chain

- Global/Regional Supply Center performs supplier sourcing, procurement engineering, warehousing & delivery of material

Complete Scope of On Time Delivery

Survey for various transport mode options
Ex) ship, rail, truck

→

Review quotations on each transport mode considering distance, obstacle & etc.

→

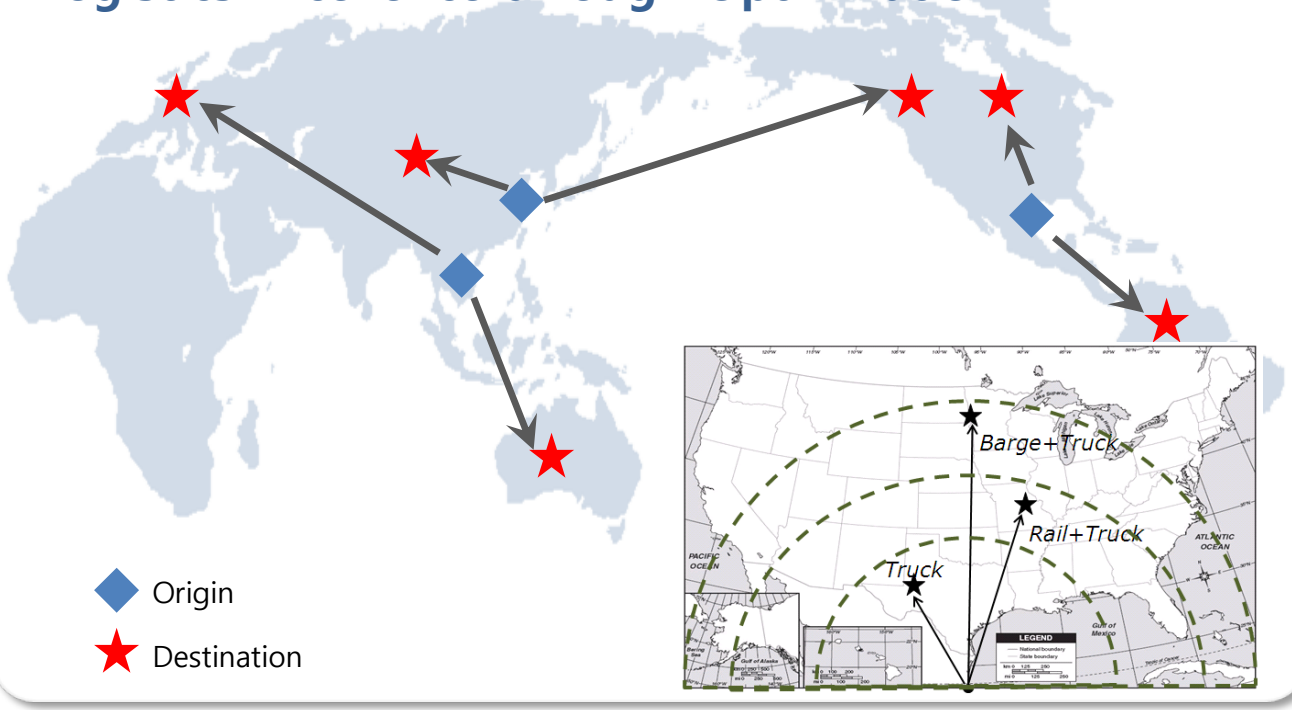
Select the optimal and most cost efficient transport mode/combination

Ship

Rail

Truck

Logistics Excellence through Optimization



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Tower Delivery Track Record

2010

Project	Region	No.
Papalotte Creek	USA	57
La Fatarella	ESP	26
Keenan	USA	33
797000	DEN	28
797001	CAN	19
797000	DEN	12
797000	DEN	6
797830	USA	17
Lower Snake River	USA	115
Griffin Forest	GBR	68
Toftedalsfjellet	SWE	21
797830	USA	25
797830	USA	12
797830	USA	12
797100	AUS	56
797830	USA	16
780723	AUS	25 F
780796	IND	13 F
780772	IND	13
797100	AUS	8
797830	USA	29
797133	NZL	12
Talbot	USA	20
797000	DEN	14

2009

Project	Region	No.
TransCanada-Kibby	USA	18
Gyorkony	GER	1
2009 Meadow Lake	USA	36
Dokie Ridge II	USA	22
Suez-Caribou I	CAN	33
2009 Meadow Lake	USA	61 Mid
Whiskey Ridge	USA	22
Pacific Wind	USA	84
Vame Various	USA	18
Vame Various 2	USA	18
Panelimon Deu	RUS	8 F
Kavarna AES – 18	BUL	33
780693	BUL	9
Dokie Ridge II	USA	2 Mid
797001	USA	16
AIM-Harrow IV – 1	CAN	109
Eon Papalote II	USA	27
PEI-Summerside	CAN	4
Harvest Wind	USA	43
Big low Ⅲ	USA	76
Horizon Dickinson	CAN	18

2008

Project	Region	No.
BP Master	USA	18
RES Westar	USA	15
Pioneer Prairie II	USA	6
EON 2009	USA	91
Kittitas Valley	USA	43
Alliant MSA	USA	18
NRG Elbow Creek	USA	31
Port Alma	CAN	26
Hackberry	USA	72
Summit Windy Point	USA	60
Biglow II	USA	65
Homologation	USA	12
Cedar Ridge	USA	23
Cloud County	USA	67
Duke Notrees	USA	18
Skypower Fermeuse	USA	9
Karvana	CAN	22
Sophien Magdelenen Hoog	BUL	19
ILN	GER	11
Karvana	EU	20 F
Fohr	BUL	27 F
Horizon MSA	USA	3
Gyorkony	EU	29
SDS & ILN	EU	30 F

2007

Project	Region	No.
Elkhorn	USA	61
Prairie Star	USA	34
Bigelow Canyon	USA	76
Blue Sky	USA	52
Alleco	USA	8
Solano II	USA	21
Smokey Hill	USA	27
Twin Groves II	USA	15
Sherbino Mesa	USA	18
Marengo II	USA	43
Horizon	USA	54
Sanko Catalca	EU	20
Pioneer Prairie	USA	42

2006

Project	Region	No.
Wild Horse	USA	127
Maple Ridge II	USA	58
Tararua	NZL	31
White Hill	USA	29
John Deer	USA	65
Marengo	USA	78

2005

Project	Region	No.
ALINTA	AUS	54
Flat Rock	USA	40
Chang Kong	TPE	23
EMU Dawns	AUS	48
Solano	USA	8

2004

Project	Region	No.
Te Apetiti	NZL	55
Bangui Bay	PHI	15

F : Foundation / Mid : Mid section

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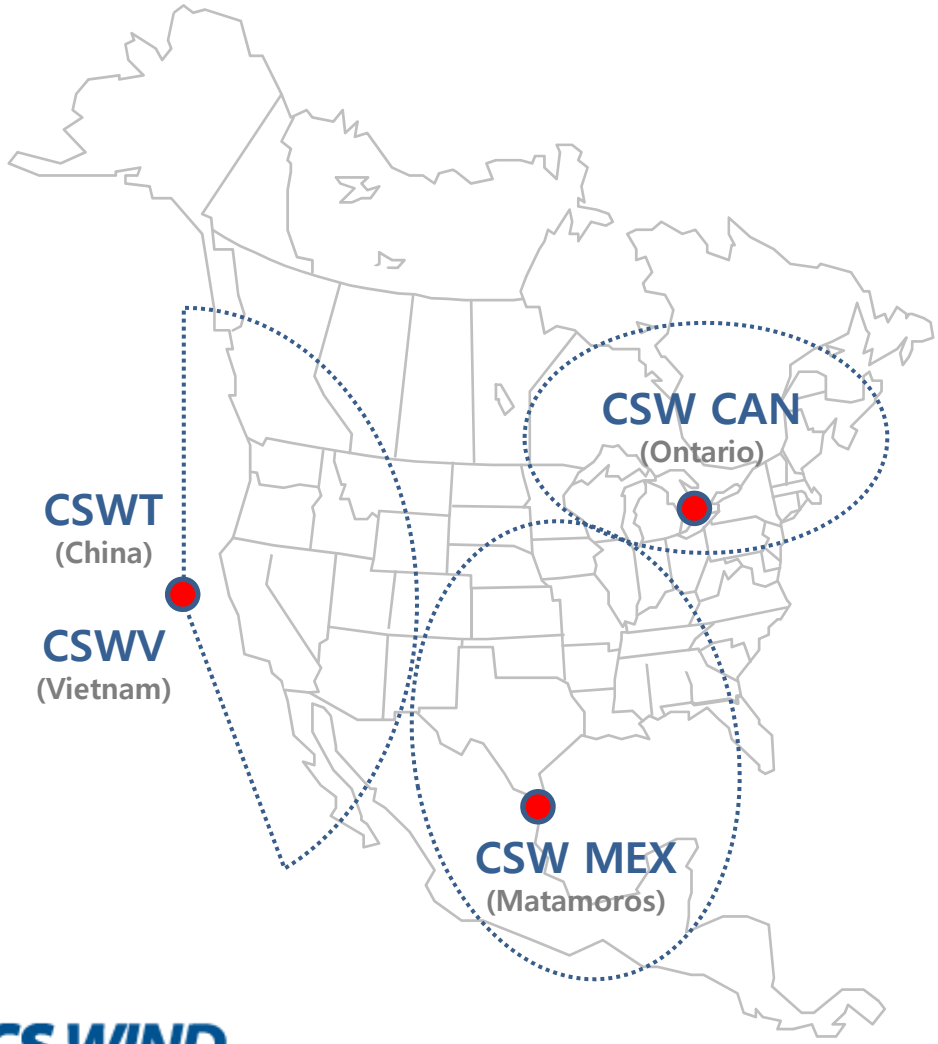
Globalization

Local Coverage in AMER Market



	MEXICO	CANADA
Location	Matamoros	Ontario
Capacity	TBD	TBD
SOP	TBD	1Q/2012
Main coverage	• Central US • Latin America	• Canada • Fresh water shore in Great Lakes
Remarks	• Embedded rail lane • RM from Asia	• Local contents fulfillment

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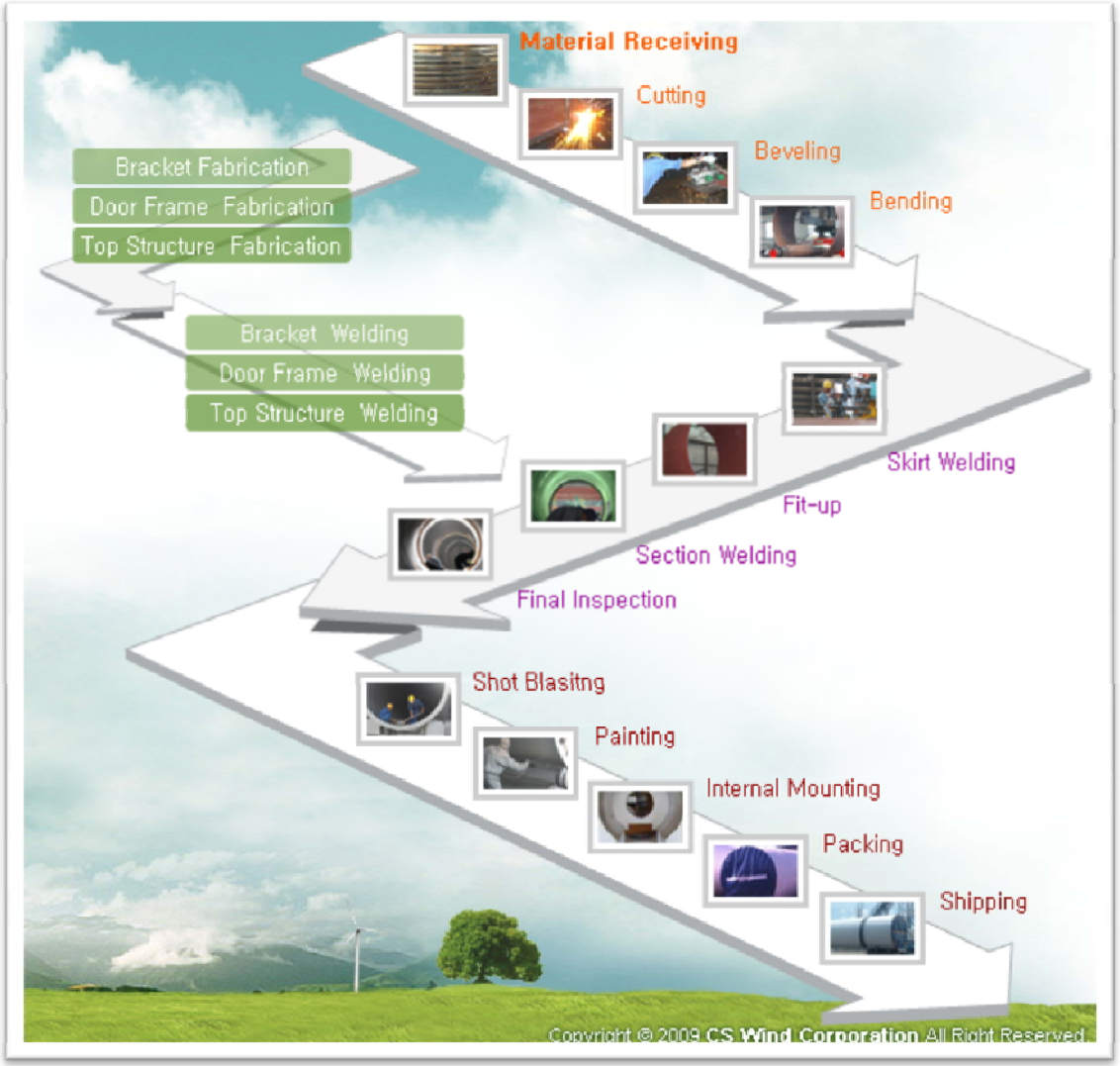
Tower Manufacturing



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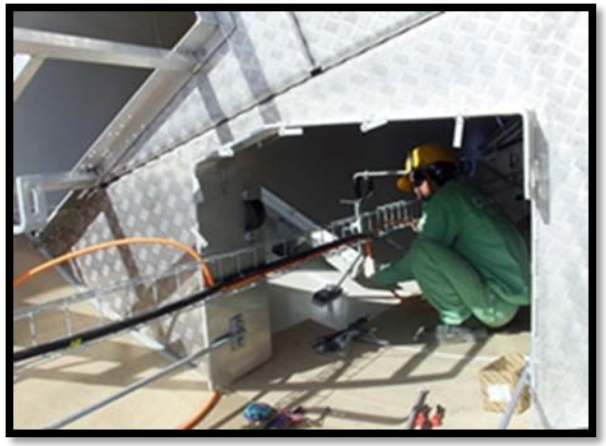
Facilities

CS Wind Vietnam _ total area : 245.5k m2(60.7 acre)

Unit : m^2

Facilities	CS Wind Vietnam	
	Area	# of lines
Fabrication shop	21,622	14
Blasting shop	4,889	15
Painting shop	6,103	20
Internal Workshop	6,286	
Storage Yard Area	140,000	
Office Building	2,988	



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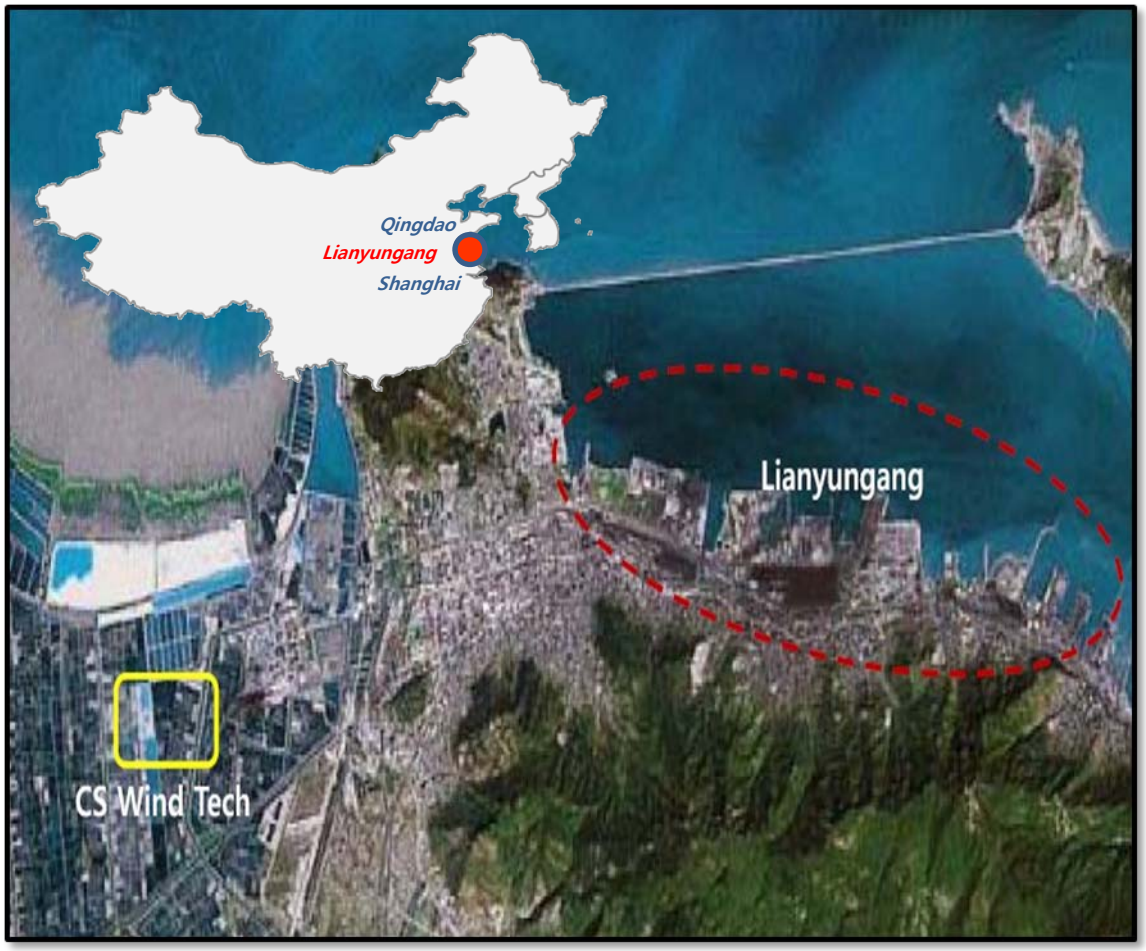
CS Wind Tech _ total area : 241.2k m2 (59.6 acre)



Unit : m^2

Facilities	CS Wind Tech	
	Area	# of lines
Fabrication shop	22,500	18
Blasting shop	8,808	14
Painting shop	10,275	10 (22 Chambers)
Internal Workshop	7,800	
Storage Yard Area	120,000	
Office Building	3,406	

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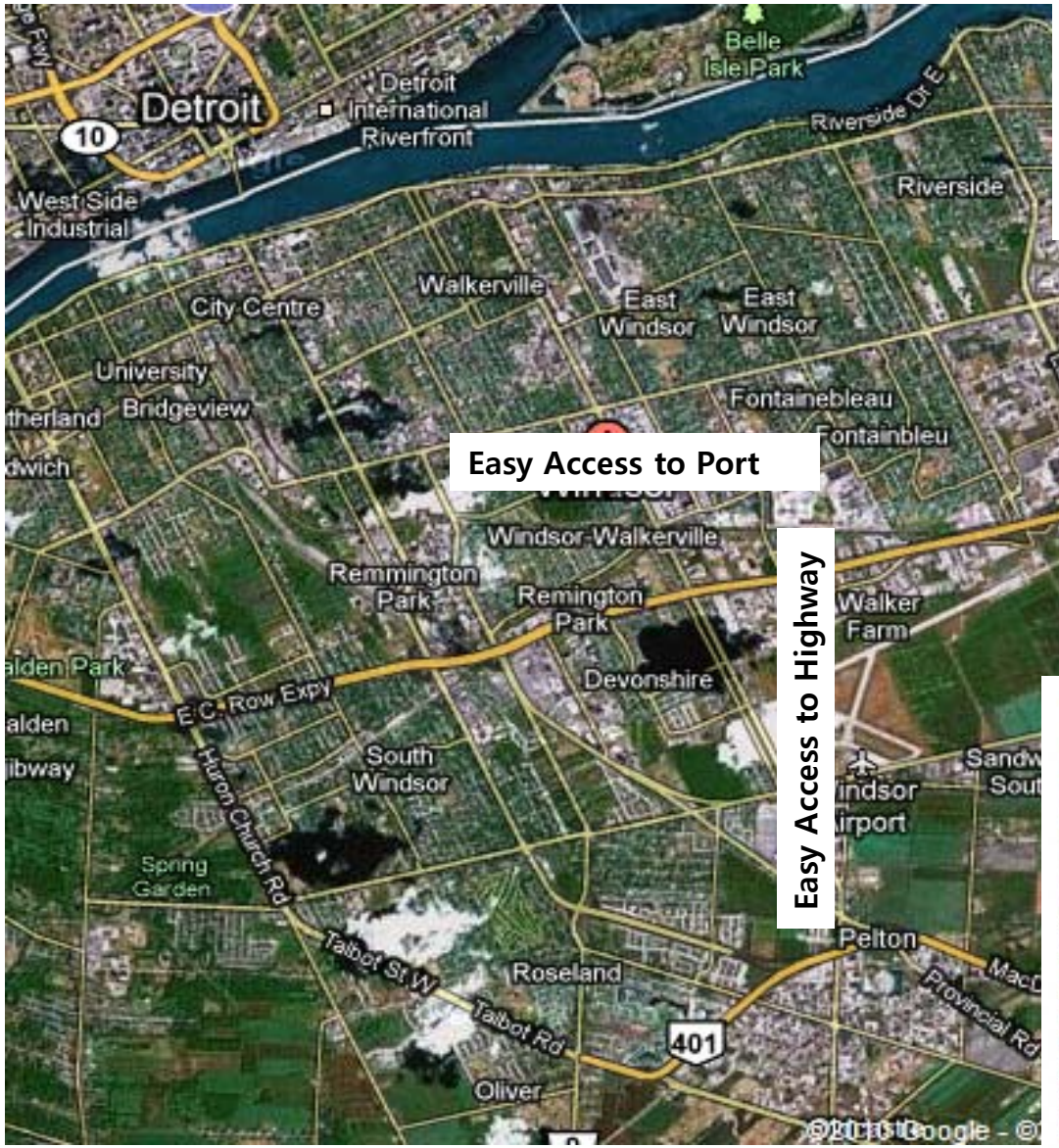
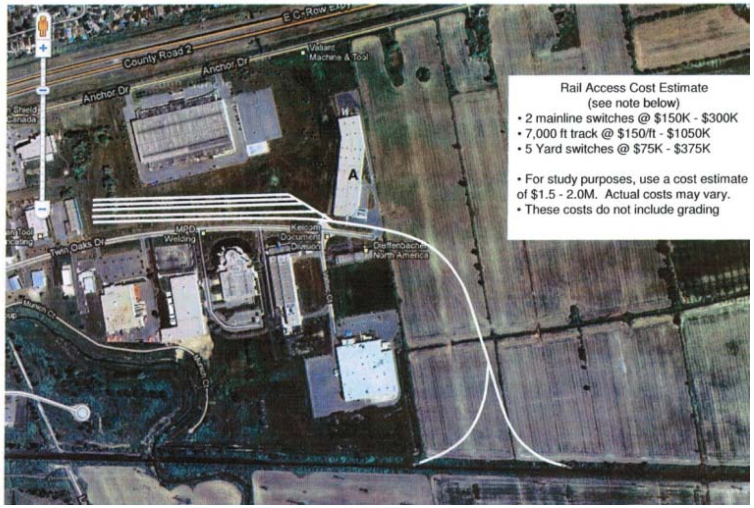
CS Wind Canada _ total area : 141.3k m2 (35 acre)





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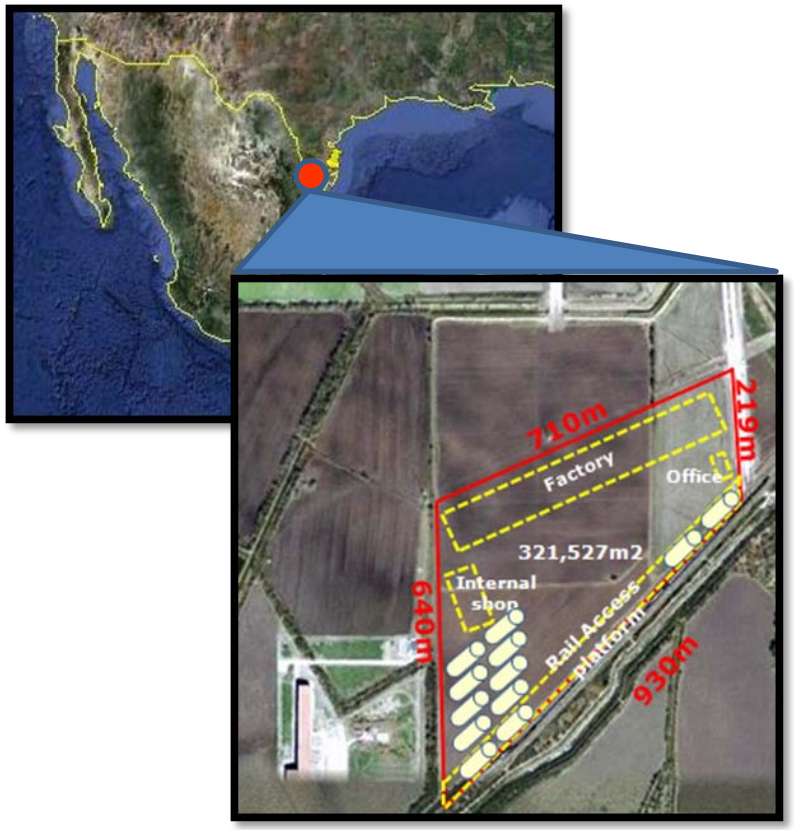
CS Wind Mexico

Matamoros, MX



13 Km to Brownsville Port
(17 miles (27 Km) of man-made channel)
220 Km to Corpus Christi

Planned production capacity

100 Towers/2011
200 Towers/2012 ~

Total land size

321,527 m^2 with option of additional m^2

Factory

50,000 m^2 6~8 production lines with option for additional lines

Storage capacity

600 sections

Embedded Rail Lines

Rail platform : 2 lines of 930m

Two rail spurs will be installed for direct loading/unloading capability of an unit train (18 ~20 complete towers)

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Feasibility Study on Ontario Tower Plant

Contents

1. Out Line of Samsung Ontario Wind Project
   1) 사업 개요 및 배경
   2) 사업 구조
   3) 사업 진행 경과
2. Ontario Project Check List & Time Table
3. Sales & Marketing
4. Weather
5. 법인의 분류 및 설립 절차

* Annex

1-1. 사업 개요 및 배경

2.5 GW
신 재생 에너지
클러스터

세계 최대 규모 신 재생 에너지(태양광 + 풍력) 클러스터 건설/ 운영

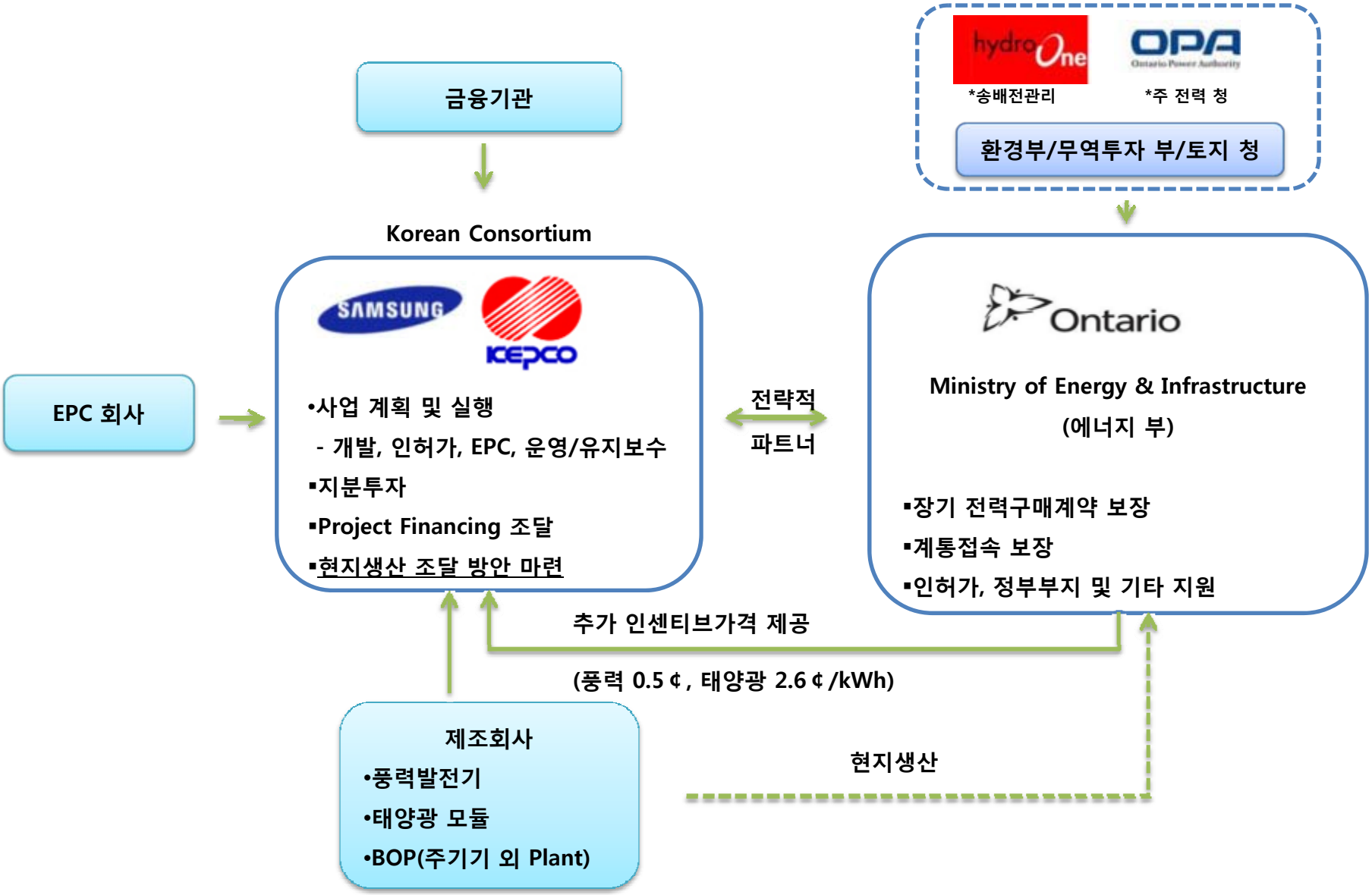
- ▪총 용량 : 2.5GW, 5단계로 진행 [풍력 2,000MW, 태양광 500MW]
  - 1단계 500MW, 2단계 500MW, 3단계 500MW, 4단계 500MW, 5단계 500MW
- •사업 개발자 : Samsung & 한전(KEPCO)
- •위치 : Ontario, Canada
- •총 투자비 : 약 60억불
- •사업기간
  - 준비기간 : '09년 ~ '10년
  - 건설기간 : '11년 ~ '16년

사업의 배경

▪ 제안형 프로젝트 사업 : 삼성물산과 온타리오 주정부간 협력 사업으로 추진

- 삼 성 : 향후 5년간 경쟁력 있는 사업 안건 확보
  EPC 수익 및 20년간 전력 판매를 통한 배당 수익 확보
  리딩 Developer로서 Market내 위상 및 사업 Reference 확보
- 주정부 : 현지 생산기반 확보 통한 산업기반 (Domestic Contents) 및 Green Job 고용창출
  신 재생 에너지법안(GEA : Green Energy Act)의 활성화 유도
  6.3GW에 이르는 석탄발전 ZERO화 (~'14년)에 따른 대체 어니지원 확보

1-2. 사업 구조


금융기관
Korean Consortium
SAMSUNG
KEPCO
EPC 회사
•사업 계획 및 실행
- 개발, 인허가, EPC, 운영/유지보수
▪지분투자
▪Project Financing 조달
▪현지생산 조달 방안 마련
전략적
파트너
hydro One
*송배전관리
OPA
*주 전력 청
환경부/무역투자 부/토지 청
Ontario
Ministry of Energy & Infrastructure
(에너지 부)
▪장기 전력구매계약 보장
▪계통접속 보장
▪인허가, 정부부지 및 기타 지원
추가 인센티브가격 제공
(풍력 0.5 ¢, 태양광 2.6 ¢/kWh)
제조회사
•풍력발전기
•태양광 모듈
•BOP(주기기 외 Plant)
현지생산

1-3. 사업 진행 경과

캐나다 온타리오 주, 그린에너지 법령 개정(KOTRA)

- 강력한 Local Contents 규제 확정, 한국기업 수출에 걸림돌 -

◈ 그린에너지 법령(Green Energy Act) 개정 내용

○ 2009년 9월 24일, 캐나다 온타리오주 정부는 2009년 2월 입법 후 5월에 통과된 그린 에너지 법령(Green Energy Act)에 대한 개정안을 발표

-그린에너지 법령은 획기적인 지원 정책을 통한 재생에너지 관련, 투자프로젝트 유치와 재생에너지 전력 사용 활성화, 친환경 일자리 창출(처음 3년간 5만여 개 일 자리 창출 예상)을 목표로 함

-이번 개정안은 발전차액지원(Feed in Tariff 이하 FIT) 인센티브프로그램 개정, Local Contents 규정 확립, 재생에너지 프로젝트 승인(Renewable Energy Approval, 이하 REA)과정 확립, 재생에너지 조력사무소(Renewable Energy Facilitation Office, 이하 REFO) 설립 등을 골자로 함

-온타리오주 그린에너지 법령 관련 추가자료는 '[정책] 캐나다 온타리오주, 그린에너지 법령 발표'(2009.3.30)와 '[정책] 캐나다 온타리오주, 그린에너지 법령 발표로 기대되는 수출 종목은 '(2009.4.15) 보고서 참조 바람

그린에너지 법령 개정안 발표 중인 온타리오 주정부 수상 및 장관

자료원 : CBC News

2. Check List & Time Schedule

No	Description
1	Factory Location Determination 공장 부지 선정
	1) Candidate site in Windsor city for New factory 윈저시 신규 공장 후보지 A. Greenfield 신축용 부지 B. Former Siemens Automobile Factory 구 지멘스 자동차 부품 공장 C. Former GM Transmission Factory 구 지엠 트랜스미션 공장 2) Check the location of Siemens Blade factory 지멘스 블레이드 공장 위치 참조 3) Information of the Possible Competitors & Analysis of Competition 잠재 경쟁사 정보 분석 - DMI, MARMEN : Visit the Local Competitors DMI, MARMEN : 지역 경쟁사 방문 4) Select the best location 최적 부지 선정
2	Survey the various infrastructures 하기 인프라 조사
	1) Land itself 선정 부지 - shape, size(300m x 500m min.) 모양, 넓이(최소:300m x500m) - altitude) concerning watertreat and necessity to raise land) 토지 고도(수로 및 토지 융기 필요성 관련) - ground soil check, hardness, Price & etc 성토 체크, 토지 경도, 가격 등 2) Logistics for Tower 타워 운송 - Logistics(Distance from Railway, Highway, Barge port, other obstacles) Supply of labor, material supply (Location of DMI factory and projcet sites) and electricity line, incentives & etc - 운송 (철로, 육로, Barge 항구까지 거리, 기타 장애물 여부 조사) 노동력 공급, 자재 공급, DMI 공장 및 프로젝트 사이트 참조, 전력선, 혜택 등 - Check any obstacles per Delivery Methods (Rail dimension, Weather & etc) - 운송 중 잠재적인 장애 요소 확인 (철로 dimension, 날씨 등) - Quotation Cost per Delivery Methods (Barge, Rail, Truck) - 타워 운송 예상 비용 견적 (Barge, 철로, 트럭) 3) Weather of Ontario 온타리오 기후 - Painting, Heating System, Logistics, Working Conditions & etc 페인팅, 난방, 운송, 근로 등에 영향을 끼치는 지 여부 - Whether of not Winter break, transportaion, Lay off 겨울 기간 중 교통, 휴가 또는 Lay off 적용 여부

2. Check List & Time Schedule

No	Description
3	Supply of Main Materials 주 원재료 공급 경로 1) Steel Plates 철판 – Survey steel plate company in Ontario & Price Quotation : Essar steel Algoma Inc. 온타리오州 철판 업체 및 가격 견적 조사 : 에사 스틸 알고마 2) Flange, Paint,Internal Parts & etc 플랜지, 페인트, 인터널 등 – Survey Flange Company world wide and Price Quotation – 글로벌 플랜지 업체 가격 견적 조사 3) Internals : Hailo, Gexpro - 인터널 : 헤일로, 젝스프로 4) Steel fabrication Company 철골 가공 업체 – Survey the suitable outsourcing companies near to factory – 공장 근처 적합한 외주 업체 조사 (Cutting/Beveling/Primer Coating : comparing outsourcing with own factory) (커팅/베벨링/프라이머 코팅 업체 조사 : 자체 제작 원칙, 가공비용 비교 분석) (Door frame, Bracket & etc) (도어 프레임, 브라켓 등)
4	Incentives from the Governments 정부 혜택 1) Survey the possible incentives – Federal/Local Governments(State&Municipal) 가능한 혜택 조사 - 연방/지역 정부 (주정부/ 지역정부) 2) Negotiation of Incentives 혜택 협상 – Direct incentives : Land supply, Cash grants and etc – 직접 혜택 : 토지 공여 / Cash grant 등 – Indirect Incentives : Tax cut, Procesure of Governmental affairs(Construct before approval, manufacture before fininshing construction, relaxation of environmental regulation, modify the road & etc – 간접 혜택 : 세제 혜택, 정부 승인 절차 (건설 승인전 건설, 건설 완료 전 생산, 완화된 환경 규제), 인접 도로 보수, (인프라 지원 요구) 등 3) Make a Contract – Federal / Local Governments 계약서 작성 - 연방 / 지역 정부
5	Company Establishments(Target : within 1 month) 법인 설립 : 변호사 고용 여부 검토 (1개월 이내 완료 목표) 1) Study the procesure of Company establishemnts and prepare documents 법인 설립 절차 및 관련 서류 준비 검토) – Business plan, Environmental effect analysis and etc – 경영 계획, 환경 영향 평가 등 2) Decide the Board Member and the registered Capital 이사회 및 자본금 등록 결정 3) Application and Approval of Company establishments 법인 설립 승인 신청서 4) Tax No application and open the account 세금 계좌 개설 5) Transfer the Capital 자본금 송금

3-1. Wind Farm Installation Status in Canada

(Installation Status)

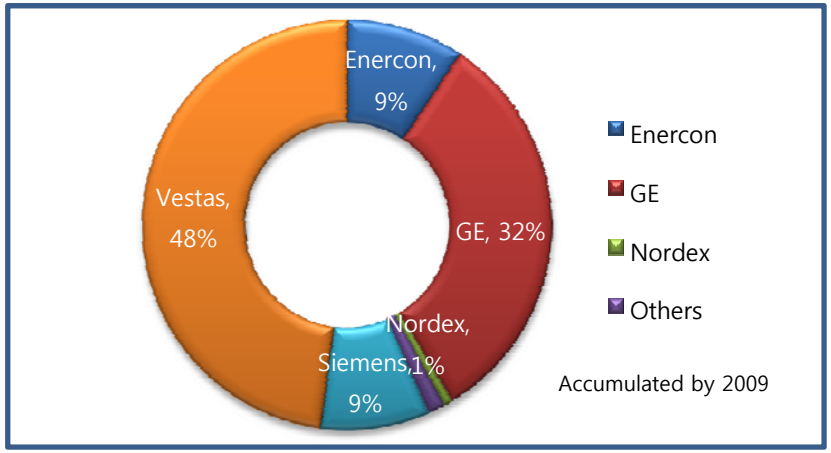
MW

Province	Installed Capacity
Ontario	1,208.0
Quebec	659.0
Alberta	590.0
New Brunswick	195.0
Saskatchewan	171.0
Prince Edward Island	164.0
Nova Scotia	110.0
Manitoba	104.0
British Colombia	102.0
Newfoundland & Labrador	54.0
Yukon Territory	0.8
Total	3,357.8

Source from CANWEA
(February, 2010)

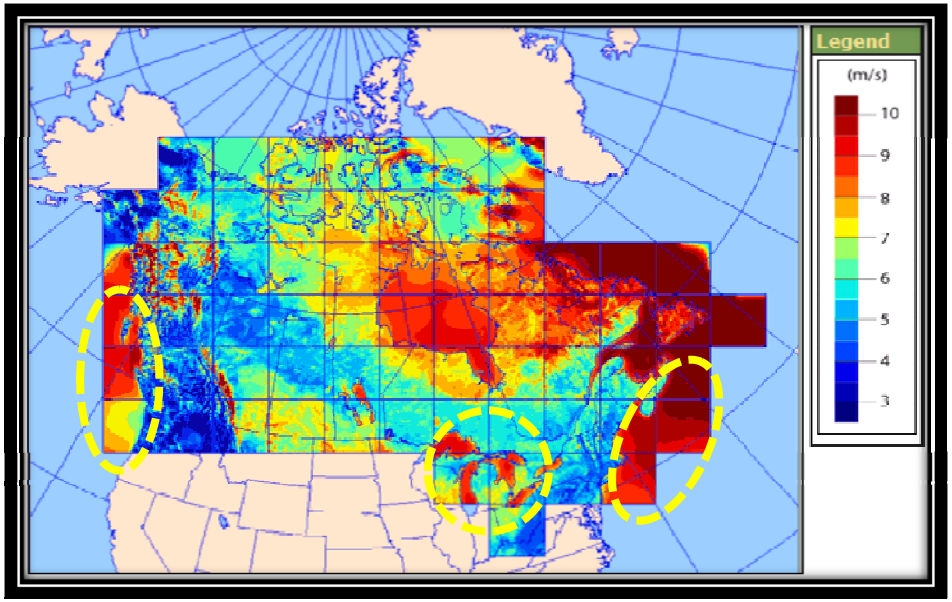
(Project Location)

(Market Share)



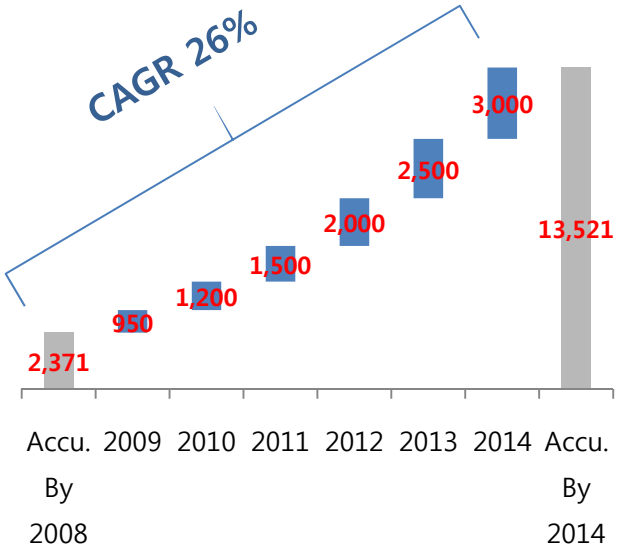
3-2. Wind Resource and Prospects of Wind Farm in Canada

(Wind Resource)



Source from CANWEA

West Area
East Area
Great Lake



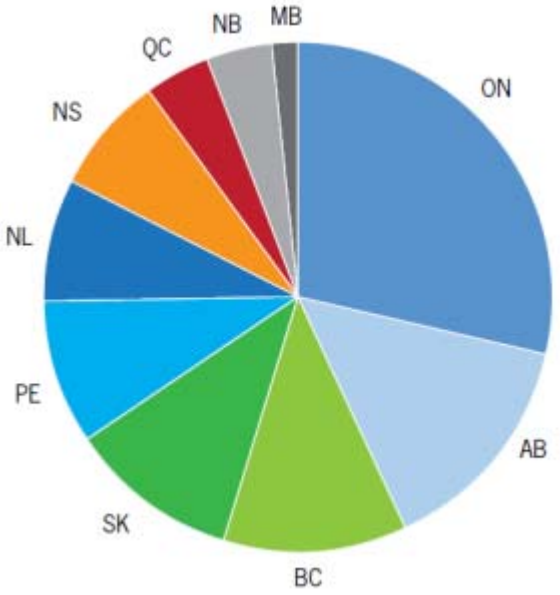
Source from BTM

(Summary of Wind Development Strategies in Canada)

Province	Development Initiative	Status
Federal	Announced the eco-Energy Renewable Power program in January 2007 to support the deployment of 4,000 MW of renewable energy between 2007 and 2011. Government also has target for 90% of electricity to be generated from clean sources by 2020	The program has been extremely successful and all funding was fully allocated by early 2010 – one year ahead of schedule. The government has been encouraged to extend the program as part of its 2010 Budget.
Ontario (1,208MW)	The Ontario Power Authority's Integrated Power System Plan had called for 4,600 MW of wind energy by 2020. However, in 2009, Ontario's new Green Energy Act came into force with a feed-in-tariff and new transmission investments that make it likely that this target will be exceeded. The government has not provided a wind-specific target.	In January 2009, OPA announced contracts for six new wind energy projects in Ontario totaling 492 MW. The first contracts to be signed under the new Feed-in-Tariff (FIT) will likely be signed in Spring 2010. Approximately 8,000 MW of wind energy projects have submitted applications for FIT contracts. At this time, 2,500 MW of capacity will be able to connect to the grid, but transmission upgrades are planned to allow the connection of significantly more capacity over the next few years.

3-2. Wind Resource and Prospects of Wind Farm in Canada

(Canada's Small Wind Market by Province)

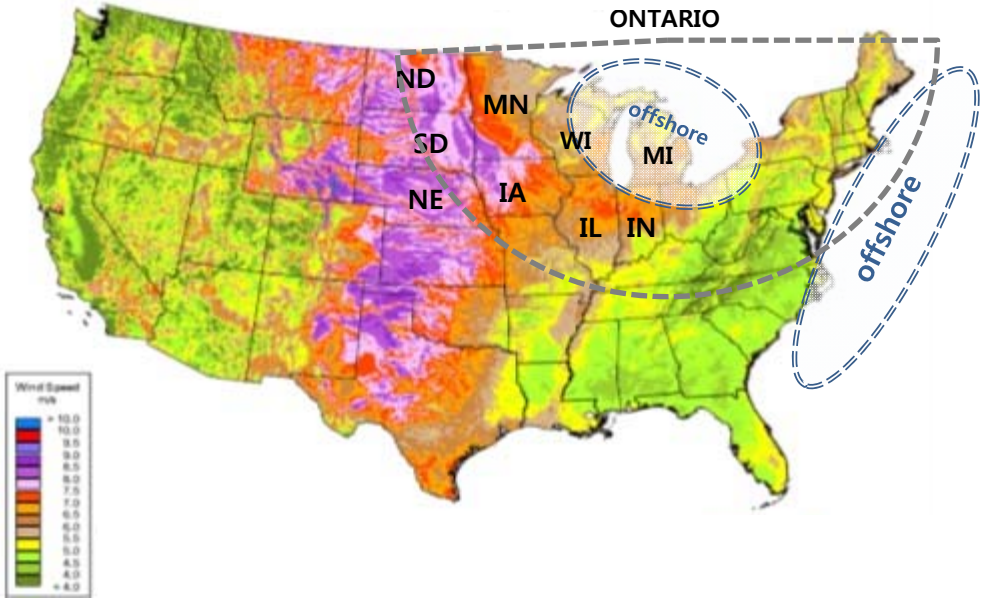


Source from CANWEA

Province	%	Reason
Ontario	29	Due to Incentive, a "small wind friendly" government, wind resources, and and environmentally aware population
Alberta	15	Due to wind resources, potential subsidies and rebates, and a "green thinking" population and businesses
British Columbia	12	Due to the location of their headquarters, wind resources, and environmental awareness of the population
Saskatchewan	11	Due to incentives and government subsidies for small wind and wind resources
Prince Edward Island	9	Due to wind resources, the high price of electricity, and government representation
Newfoundland	6	Due to wind resources, opportunities for wind diesel installations, and project economics
Nova Scotia	6	Due to wind resources and incentives
Quebec	5	Due to government policies and wind resources
New Brunswick	5	Due to the high price of electricity
Manitoba	2	1 respondent

3-3. Challengeable Market of USA from Windsor

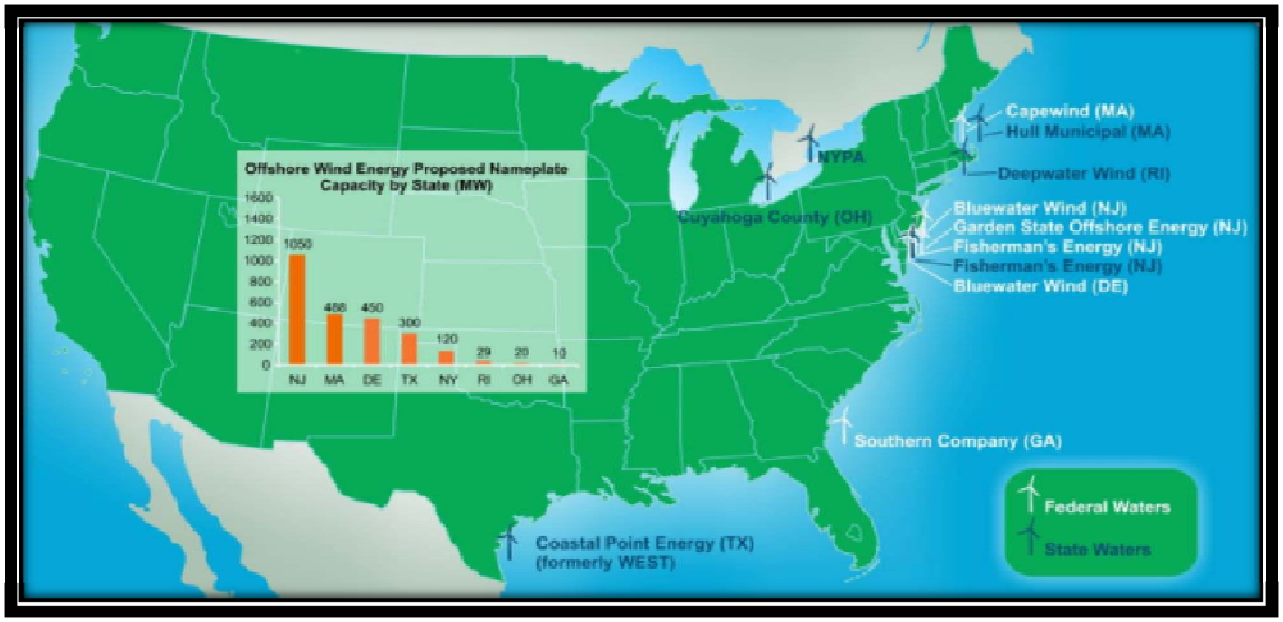
(Onshore opportunity by State)



State		Wind Available Area (% of State)	Installable Capacity (MW)	Y/N	RES %	Year	Accu. installation (by 2Q/'10)
Nebraska	NE	91.6%	917,998	No			
S. Dakota	SD	88.3%	882,412	Goal	10%	2015	412
N. Dakota	ND	84.2%	770,195	Goal	10%	2015	1,222
Iowa	IA	78.3%	570,714	Yes			3,670
Minnesota	MN	44.8%	489,270	Yes	25%	2025	1,796
Illinois	IL	34.2%	249,882	Yes	25%	2025	1,848
Indiana	IN	31.6%	148,227	No			1,127
Wisconsin	WI	14.2%	103,757	Yes	10%	2015	449
Michigan	MI	7.8%	59,042	Yes	10%	2015	143

3-3. Challengeable Market of USA from Windsor

(Offshore opportunity by State)



Source from Energetics Incorporated

(Offshore Wind Resource Potential by Region and Water Depth for Areas with Annual Average Wind Speeds 7.5 m/s or Greater at 90-m Elevation)

Region	GW by Depth (m)			Total
	0 - 30	30 - 60	> 60	(GW)
New England	86.85	134.2	250.25	471.3
Mid-Atlantic	253.75	179.05	92.5	525.3
South Atlantic Bight	86.6	48.8	7.7	143.1
California	2.65	8.7	547.1	558.45
Pacific Northwest	9.2	20.05	304.7	333.95
Great Lakes	125.65	89.3	424.1	639.05
Gulf of Mexico	197.9	104.7	95.45	398.05
Hawaii	1.75	3.6	479.1	484.45
Total	764.35	588.4	2200.9	3553.65

3-4. North American Competitive Situation

Turbine Vendor and Component Supply Relationship

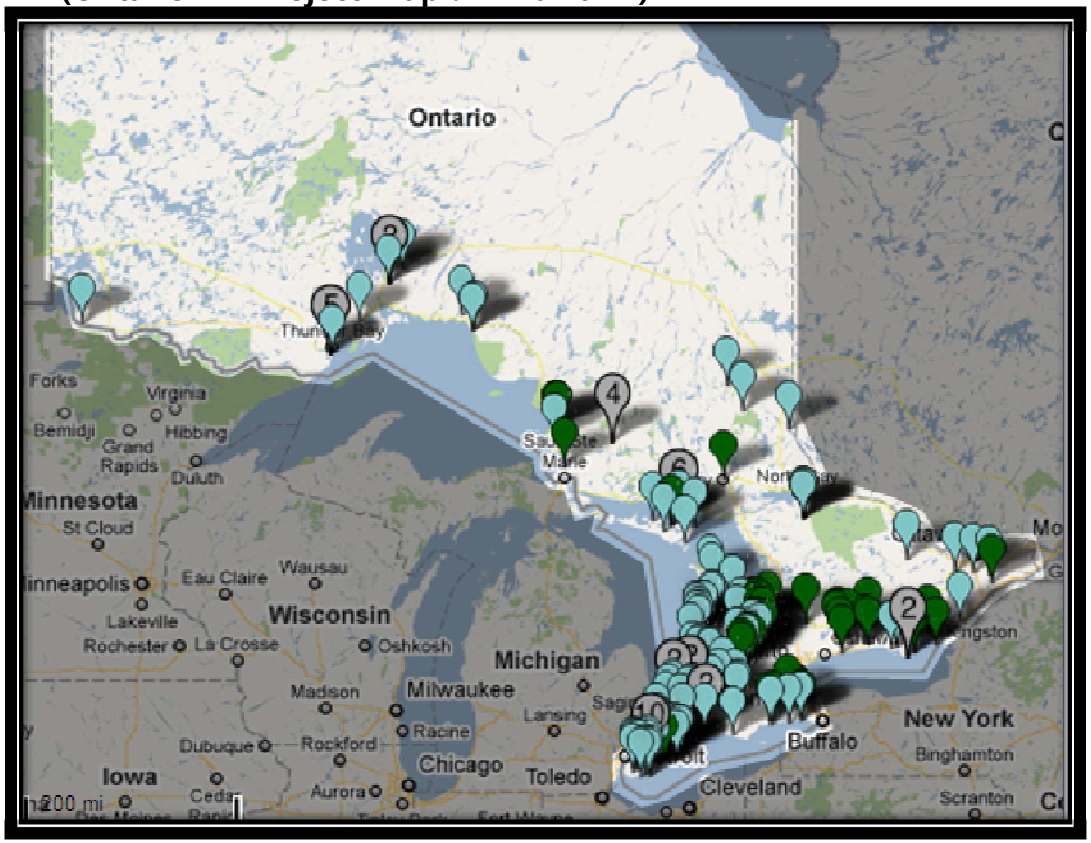
In-house	Outsource	Rotor/Blade		Gearbox		Controls		Generator		Castings		Tower	
Mitsubishi Power Systems		Mitsubishi/TPI (Vientek)		Ishibashi		Mitsubishi		Mitsubishi		Various local firms		Mitsubishi	Local firms
Nordex		Nordex	LM, NCI, Baoding HT	Winergy, Bosch Rexroth, Eickhoff		Nordex	Mita	Loher/Winergy, Elin		Siempelkamp		Nordex	Omnical, Local firms
Siemens		Siemens Wind Power	LM	Winergy	Hansen	KK Electronic		Loher/ Winergy	ABB	Sakana, Metso, Local firms		KGW, Roug, Colper, Local firms	
Suzlon		Suzlon	LM	Hansen	Winergy	Suzlon		Suzlon	Elin	Patel Alloy		Suzlon	Local firms
Repower Systems		LM, A&R		Winergy, Eickhoff, RENK		Mita Teknik		Winergy, VEM		Siempelkamp		Klotz, Reuther, Local firms	
Vestas		Vestas	LM	Hansen, Winergy, Moventas, Fellar, Jahnel-Kestermann		Vestas		Vestas	ABB, Leroy Somer, Elin (VAT Tech)	Vestas	Patel Alloy, Metso	Vestas	Local firms
AAER Wind Energy		AAER (EUROS)		Jahnel-Kestermann		American Superconductor		EC Holden, Elin		Local firms		Local firms	
Acciona Windpower		LM Glasfiber Tecsis		Moventas, Winergy		Ingeteam		Ingeteam		Sakana, Felguera, Local firms		Acciona	Local firms
Clipper		Tecsis		Clipper		Clipper		Grupo Potencia		Local firms		Local firms	
Gamesa		Gamesa	LM	Echesa (Gamesa)	Ingoteam	Ingeteam		Ingeteam		Fundicion Nodular del Norte	ATL, Sakana, Felguera, Hodge	Gamesa	Local firms
GE Wind Energy		LM, TPI, MFG, A&R, Tecsis		GE Rail	Rexroth, Eickhoff, Moventas, Winergy, Etc.*	GE		ABB, Hitachi, VEM, Winergy		Buderus, Felguera, Hodge, Thyssen, othe		Trinity, DMI, SIAG, Marmen, Titan, Local firms	

Source: Emerging Energy Research

* For complete listing and latest data, visit EER's website: www.emerging-energy.com

3-5. Wind Resource and Prospects of Wind Farm in Ontario, Canada

(Ontario FIT Project Map : Wind Farm)



Status Contract Offered Awaiting ECT **(Economic Connection Test)**

3-6. Competitions

(Competitors Map of North America)

	Company	Location
1	Aerisyn	Chattanooga, Tennessee
2	Ameron International	Fontana, California
3	Beaird Industries	Shreveport, Louisiana
4	Bergen Southwest Steel	Canutillo, Texas
5	DMI Industries	West Fargo, North Dakota
6		Fort Erie, Ontario
7		Tulsa, Oklahoma
8	Dragon Wind (Modern Group	Lamar, Colorado
9	Gamesa	Falls, Pennsylvania
10	Hendricks Industries	Keokuk, Iowa
11	Hitachi Canadian Industries	Saskatoon, Saskatchewan
12	Katana Summit	Columbus, Nebraska
13		Ephrata, Washington
14	Marmen	Matane, Quebec
15	Martifer	San Angelo, Texas
16	RTLC Windtowers	McGregor, Texas
17	SMI & Hydraulics	Porter, Minnesota
18	SPECO	Monclova, Mexico
19	Tower Tech	Manitowoc, Wisconsin
20		Abilene, Texas
21		Sioux Falls, South Dakota
22	Trinity Structural Tower	Fort Worth, Texas
23		Clinton, Illinois
24		Newton, Iowa
25		Castaños, Mexico
26		Tulsa, Oklahoma
27	Vestas	Pueblo, Colorado
28	Zarges Aluminum Systems	Amarillo, Texas
29	Eagle Claw Fabrication	Port of Muskogee, Oklahoma
30	Vent ower	Port of Monroe, Michigan

Source from EER

(Possible Competitors Against CS for Canada & USA Market)

Country	Company	Capacity	Location
Canada	DMI Industries (6)	1,000 MW	Fort Erie, Ontario
	Marmen (14)	2,004 MW	Matane, Quebec
USA	Trinity Structural Tower (24)	1,300 MW	Newton, Iowa
	Tower Tech (19)	1,000 MW	Manitowoc, Wisconsin
	Aerisyn (1)	625 MW	Chattanooga, Tennessee

4. Weather(Windsor)

Climate data for Windsor [hide]

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °C (°F)	17.8 (64)	20.4 (68.7)	26.6 (79.9)	31.1 (88)	34.0 (93.2)	40.2 (104.4)	38.3 (100.9)	37.7 (99.9)	37.2 (99)	32.2 (90)	26.1 (79)	19.6 (67.3)	40.2 (104.4)
Average high °C (°F)	-0.9 (30.4)	0.6 (33.1)	6.4 (43.5)	13.4 (56.1)	20.5 (68.9)	25.4 (77.7)	27.9 (82.2)	26.6 (79.9)	22.5 (72.5)	15.6 (60.1)	8.3 (46.9)	1.9 (35.4)	14.0 (57.2)
Average low °C (°F)	-8.1 (17.4)	-7.0 (19.4)	-2.4 (27.7)	3.0 (37.4)	9.3 (48.7)	14.7 (58.5)	17.4 (63.3)	16.6 (61.9)	12.3 (54.1)	6.2 (43.2)	0.9 (33.6)	-4.8 (23.4)	4.9 (40.8)
Record low °C (°F)	-29.1 (-20.4)	-23.4 (-10.1)	-16.4 (-2.9)	-9.5 (14.9)	-2.8 (27)	2.8 (37)	5.6 (42.1)	5.2 (41.4)	-1.1 (30)	-5.0 (23)	-15.6 (3.9)	-23.4 (-10.1)	-29.1 (-20.4)
Precipitation mm (inches)	57.6 (2.268)	57.3 (2.256)	75.0 (2.953)	85.1 (3.35)	80.8 (3.181)	89.8 (3.535)	81.8 (3.22)	79.7 (3.138)	96.2 (3.787)	64.9 (2.555)	75.5 (2.972)	74.7 (2.941)	918.3 (36.154)
Rainfall mm (inches)	28.7 (1.13)	33.3 (1.311)	55.6 (2.189)	80.7 (3.177)	80.7 (3.177)	89.8 (3.535)	81.8 (3.22)	79.7 (3.138)	96.2 (3.787)	64.1 (2.524)	67.3 (2.65)	47.3 (1.862)	805.2 (31.701)
Snowfall cm (inches)	35.0 (13.78)	27.5 (10.83)	20.6 (8.11)	4.3 (1.69)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0.7 (0.28)	8.3 (3.27)	30.1 (11.85)	126.6 (49.84)
Avg. precipitation days	15.1	12.3	13.9	13.3	11.8	11.0	10.2	10.0	10.9	10.5	12.8	14.8	146.7
Avg. rainy days	5.7	5.6	9.4	12.2	11.8	11.0	10.2	10.0	10.9	10.5	10.8	7.9	115.8
Avg. snowy days	12.5	9.1	6.7	2.3	.03	0	0	0	0	.33	3.8	10.2	44.96

Source: Environment Canada[6]

참고) 시카고, 디트로이트, 뉴욕, 보스턴 및 캐나다(토론토 및 인근지역)의 경우 겨울철 눈으로 인한 도로 결빙으로 운송의 어려움이 있음

오대호 내 Barge운송은 매년 12월 15일경 ~ 3월 말까지 오대호 결빙으로 인하여 Barge 운송 불가능

5. 법인 분류 및 설립 절차

◈ 법인 설립 절차 (Foreign Corporation's Subsidiary in Canada)

1) 투자신고 및 투자 사 전심의

캐나다는 외국인 투자에 대해 1985년 제정된 캐나다투자 법(ICA)에 의거, 투자액수, WTO 회원국, 정부 보호 핵심 국가 산업 여부에 따른 규제를 제외한 대부분의 경우 특별한 규제 없이 신고만으로 투자가 가능하다.

투자신고 및 심의는 산업 부 산하 투자심의 부서(Investment Review Division)에서 이루어진다.

투자신고 (Notifiable transaction의 경우)	• 캐나다투자법(ICA)에 명시된 투자제한 조건 이외의 투자는 투자 개시 전이나 투자 후 30일 이내에 신고해야 함. • 투자 이후 30일 이내에 신고하지 않을 경우, 감독관이 즉시 투자자에게 신고 명령을 내릴 수 있음.
심의신청 (Reviewable transaction의 경우)	• 캐나다투자법(ICA)에 명시된 투자제한 조건에 해당하는 투자는 심의신청(Application for review)을 해야 하며 필요시 서면 각서(Written Memorandum)를 별도로 제출해야 함. • 투자승인 여부는 심의신청 후 45일 이내에 통보되며, 필요한 경우 30일까지 심의기간이 연장됨. • 심의 기간 내에 별도의 승인여부 통보가 없을 경우 투자승인으로 간주

자료: Investment Canada Act

5. 법인 분류 및 설립 절차

◈ 법인 설립 절차 (Foreign Corporation's Subsidiary in Canada)

2) 현지법인 설립

○ 현지법인 설립 시, 연방법인과 주법인 중 택일하여 설립

- 주 별로 법인 신청 절차 및 구비서류에서 약간의 차이는 있으나, 기본 사항은 연방법인 설립 절차와 유사
- 서류를 우편으로 제출할 경우 250 캐나다달러인 반면, 온라인상으로 신청할 경우 200 캐나다달러로 보다 저렴
- 온라인 신청은 Canada Online Filing Centre의 웹사이트 이용
- 우편신청 시 Corporations Canada "Information Kit"에서 양식 출력

연방법인 설립 시 구비 서류

Form1(Articles of Incorporation)	상호, 배당방법 등 기본사항
Form3(Notice of Registered Office or Notice of Change of Registered Office)	사무실 소재지 정보
Form6(Notice of Directors or Notice of Change of Directors or Notice of Change of Address of a Present Director)	이사회 정보
NUANS 보고서	상기 양식 1,3,6과 함께 제출 (필요에 따라 선 제출 가능)

자료: 캐나다 연방기업법(CBCA)

주요 주법인 등록 서류

구분	온타리오주	브리티시 컬럼비아주
제출 서류 및 비용	- 온타리오주 기업법(BCA)에 의거하여 'BCA Form1'작성 - 신청비용: 360 캐나다달러(온라인 신청 시 300 캐나다달러)	- 주정부 웹사이트에서 필요한 서류 작성 가능 - 제3자가 법인등록 시 추가 서비스 비용 부과
해당 웹사이트	http://www.cbs.gov.on.ca/mcbs/english/4VWQQC.htm	www.corporateonline.gov.bc.ca

globalwindow
www.globalwindow.org

◈ 법인 설립 절차 (Foreign Corporation's Subsidiary in Canada)

3) 기타 면허 취득 및 세무계좌 개설

주 별로 영업종류에 따라서 추가로 면허를 취득하거나 세금계좌를 개설해야 하며, 주 별로 필요한 면허나 세금 계좌의 종류가 매우 다양하며, 관할 정부에 문의를 통해 확인이 가능하다

구분	온타리오주	브리티시컬럼비아주
담당 기관	Ministry of Finance www.fin.gov.on.ca	Ministry of Provincial Revenue www.rev.gov.bc.ca/ctb/
해당 사항	소매판매업의 경우, 판매세(PST)계정을 개설하고, 해당 시청에 사업자등록 필수	

◈ 지점 설립 절차(Foreign Corporation's Branch Office in Canada)

1) 개요

○ 외국기업의 지점에는 소득세법(Income Tax rate Act)에 따라 지점세 (Brach profit tax)가 최대 25%까지 추가 적용되나, 한국은 '이중과세방지협약'에 의하여 5%의 지점세를 적용 받는다

○ 외국기업의 지점은 정부의 인센티브 혜택을 받지 못하며, 법정 분쟁 시 국내기업으로 보호를 받지 못한다

(자료 : " Doing Business in Canada", Osler, Hoskin & Harcourt LLP)

2) 세부 설립 절차

○ 지점은 타 국가에서 법인으로 등록된 외국기업이 캐나다 내에서 영업권만을 취득하여 영리활동을 하는 것으로, 법인 설립 시 필요한 '주 및 연방정부에 법인등록서류 제출' 절차를 제외하고 매우 유사하다

- 투자신고 및 투자사전 심의
- 외래기업 면허(Extra Provincial License) 취득
- 사업자 등록 번호(Business Number) 취득 및 세무계좌 개설
- 기타 면허 취득 및 세무계좌 개설

○ 지점 설립 시 가장 중요하게 요구되는 서류는 외래기업 면허(Extra Provincial License)로 외부에서 설립된 기업에게 발행하는 영업 허가서류에 해당된다.

Annex 1. Federal and Provincial Initiatives

Province (Installed capa.)	Development Initiative	Status
Federal	Announced the ecoEnergy Renewable Power program in January 2007 to support the deployment of 4,000 MW of renewable energy between 2007 and 2011. Government also has target for 90% of electricity to be generated from clean sources by 2020	The program has been extremely successful and all funding was fully allocated by early 2010 – one year ahead of schedule. The government has been encouraged to extend the program as part of its 2010 Budget.
British Columbia (102MW)	Government aims to achieve energy self-sufficiency by 2016. 50% of new generation to come from clean energy sources (no specific wind energy target).	BC's first wind farm was commissioned in 2009. In 2009, BC Hydro issued a Clean Power Call for 3,000 - 5,000 GWh/yr - winners are expected to be announced in Spring of 2010. In February 2010, the BC Government announced the development of a Clean Energy Act which is supposed to include a new procurement process and streamlined regulatory and approvals process. No target for wind energy was identified.
Alberta (590MW)	No provincial target. Note that Alberta operates Canada's only fully deregulated electricity market.	Alberta Electric System Operator (AESO) has applied to build new transmission infrastructure to accommodate more than 3,000 MW of wind generation in Southern Alberta. AESO has also undertaken a new interconnection process designed to bring more certainty to the process.
Saskatchewan (171MW)	Provincial energy strategy seeks to have 300 MW of wind energy in Saskatchewan by 2011.	171 MW currently in place and an additional 25 MW are contracted. SaskPower has indicated it will issue a call for 175 MW of new wind energy in 2010.
Manitoba (104MW)	Manitoba Government seeking 1000 MW of wind energy by 2016.	Currently 104 MW in place. In 2007, Manitoba Hydro launched a RFP process for an additional 300 MW of wind – the resulting contracts have yet to be finalized. No announcements have been made on the timing of subsequent procurement processes.

Source from CANWEA

Annex 2. Delivery from Windsor to each Major Cities

Distance & Cost

(Trucking)

From Windsor <C$>

City	Cost (Per Tower) Trucking	Remarks
Chatham, Canada	27,500	Only Trucking
Detroit, USA	27,500	
Halimand, Canada	60,000	Only Trucking
Chicago, USA	76,000	
Minneapolis, USA	174,000	
Quebec, Canada	176,000	

(Barge)

From Windsor <C$>

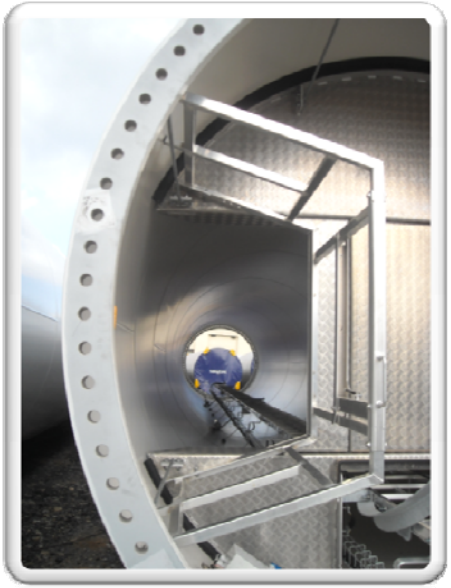
City	Cost (Per Tower) Barge	Remarks
Thunder Bay, Canada	36,250	3.35 days
Chicago, USA	38,000	3.51 days
Duluth, USA	40,450	4.07 days
Montreal, Canada	41,450	4.09 days
Saint. John, Canada	81,450	11.12 days
Philadelphia, USA	99,000	14.03 days

(Rail)

From Windsor <C$>

City	Cost (Per Tower) Rail	Remarks
PQ, Quebec, Canada	47,500	Idler=2,000 C$

100개 Section 기준, Idler 10개 발생 예상



Thank You!

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