



KOENIG & CONSULTANTS

The Value
Factory™

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Money Makes the Blades Go Round

7th Canadian German Wind Energy Conference



CANADIAN GERMAN CHAMBER OF INDUSTRY AND COMMERCE INC.
LA CHAMBRE CANADIENNE ALLEMANDE DE L'INDUSTRIE ET DU COMMERCE INC.
DEUTSCH-KANADISCHE INDUSTRIE - UND HANDELSKAMMER

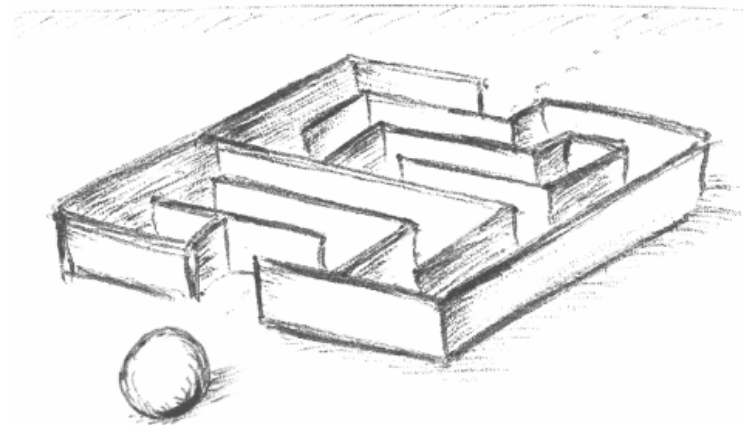
TORONTO | MONTREAL | VANCOUVER

Presented by Dr. Ingo Koenig
Montreal, February 8, 2011



What we do – the 15 second Commercial

- ▲ Business and Project-Plans
- ▲ Investments and Technology Assessment
- ▲ Stakeholder-Communication/Community Engagement



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Agenda

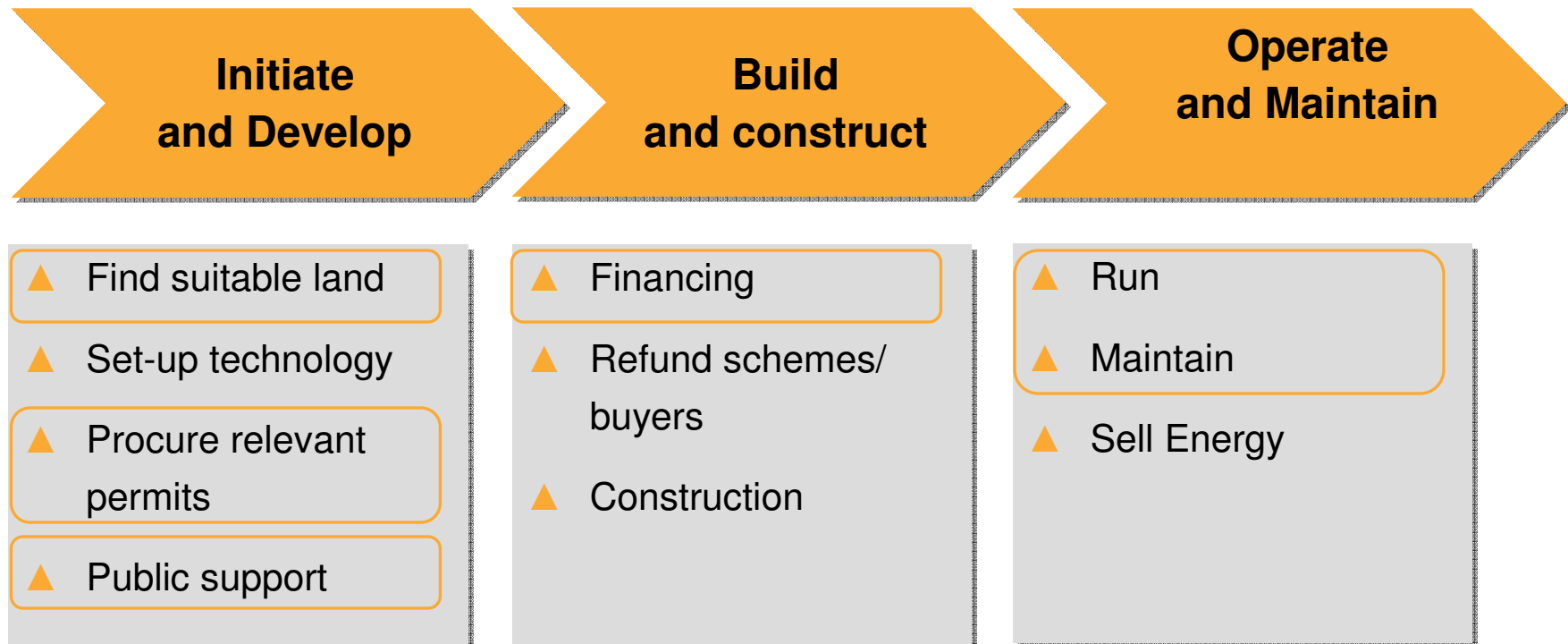
▲ Why Community Power?

▲ Community vs. Corporate Power in Europe and Canada?

▲ The challenge: Financing



Wind energy value chain

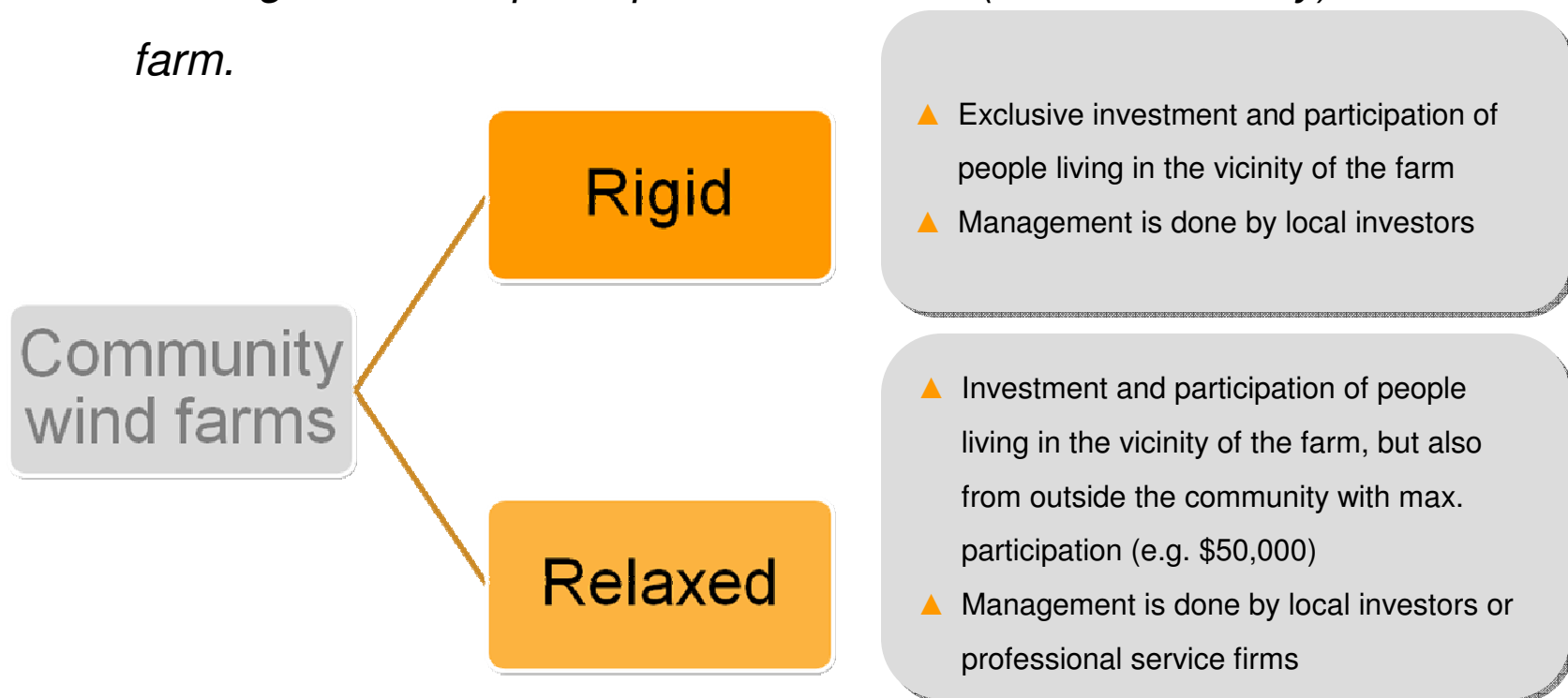


Community power makes a difference!



Community power is....

Definition: *A community wind farm is a consequent financial, conceptual and organisational participation of citizens (local community) in a wind farm.*





Why community power?

Socio economic benefits like
local jobs and education

Higher returns
for investors



Creates a more
sustainable industry

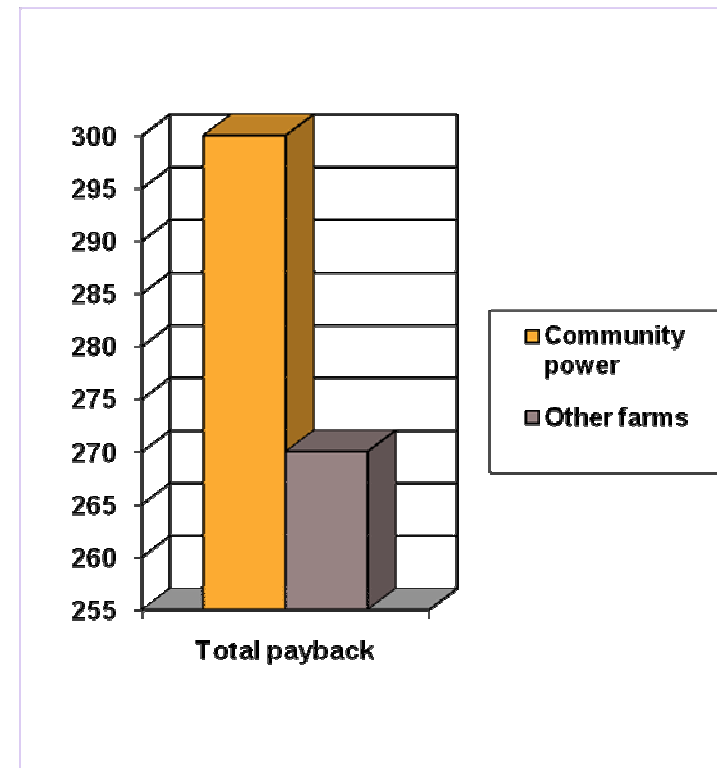
Faster approvals



Community projects can more profitable because...

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- ▲ High personal involvement keeps “**soft costs**” low (5-10% of investment compared to 15-40% investment)
- ▲ High personal involvement improves information flow, and peer pressure lead to **short repair reaction times** and therefore **higher availability** and revenues
- ▲ **Lower land leases** as everybody is a community member (3% vs. 6%)
- ▲ Improved understanding in community leads to **faster permitting process**; from push to pull (They do not have to accept the park, they now want it!)
- ▲ **Equity is relatively inexpensive**, you do not deal with professional investors and very expensive due diligence processes





Community power has other benefits than an improved ROI



Local multiplier effect benefits everyone

- ▲ Every local dollar invested results in a minimum of 3 times the benefit to the local community <--> If an external developer owns and controls the project these benefits are lost
- ▲ Re-Powering of machines becomes much easier in the future
- ▲ Municipal, provincial taxes stay locally



Jobs

- ▲ ~ 110,000 new jobs have been created in Europe
- ▲ Potential construction jobs and training for local community
- ▲ Two local positions per project created to administer and maintain the project and coordinate owners and finances
- ▲ Service personnel is regionally based (accountant, lawyers, maintenance, etc.)



Community power in Nordfriesland (North Frisia)

- ▲ After tourism and agriculture the third largest industry
- ▲ Community wind farms account for more than \$ 170 mill. revenues
- ▲ 6.000 individual investors of 166.270 inhabitants (4%)
- ▲ 750+ MW installed capacity, still growing
- ▲ Local taxes paid: \$ 13.5 mill.
- ▲ Leases to land owners: \$ 8 mill.





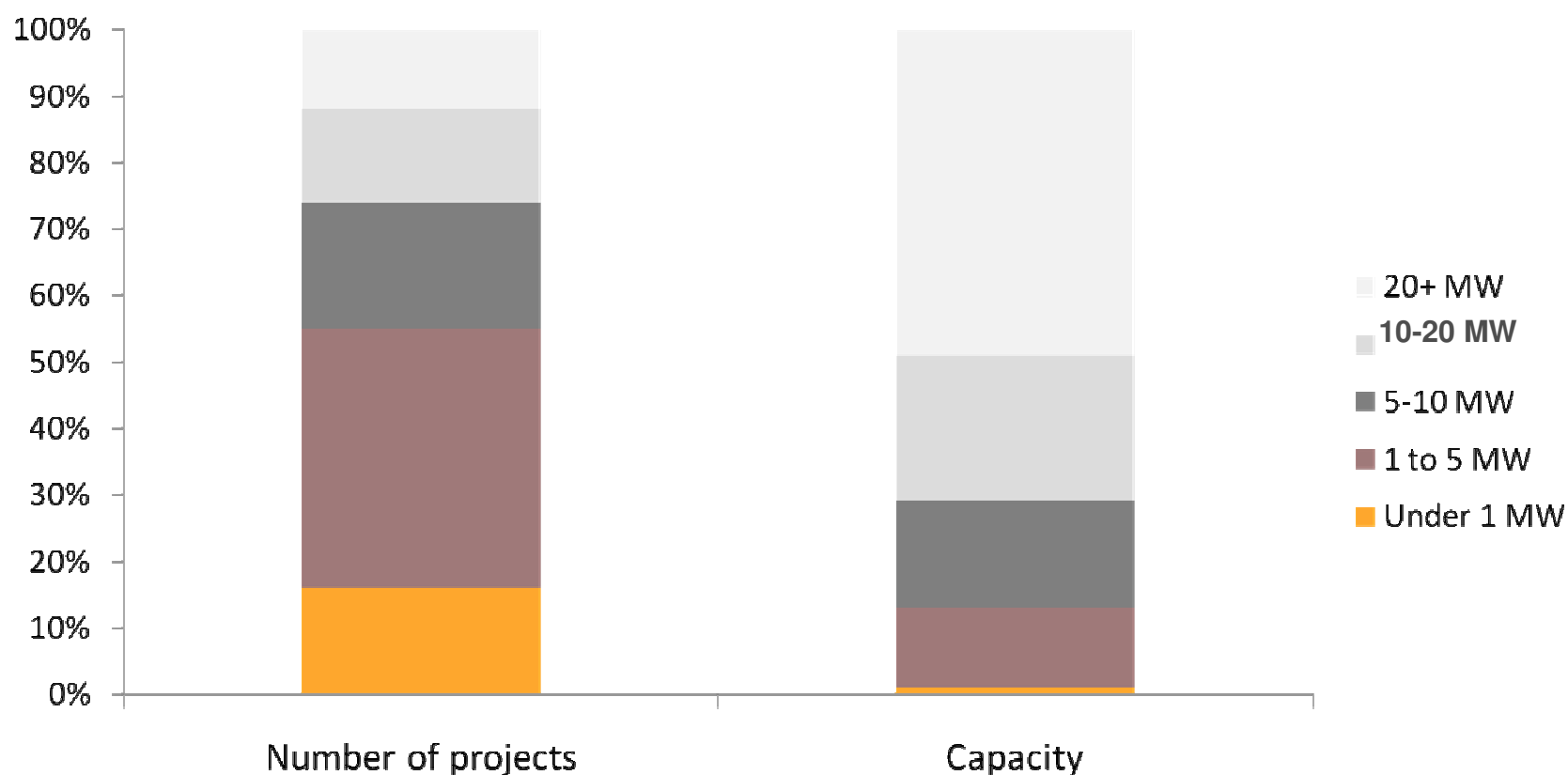
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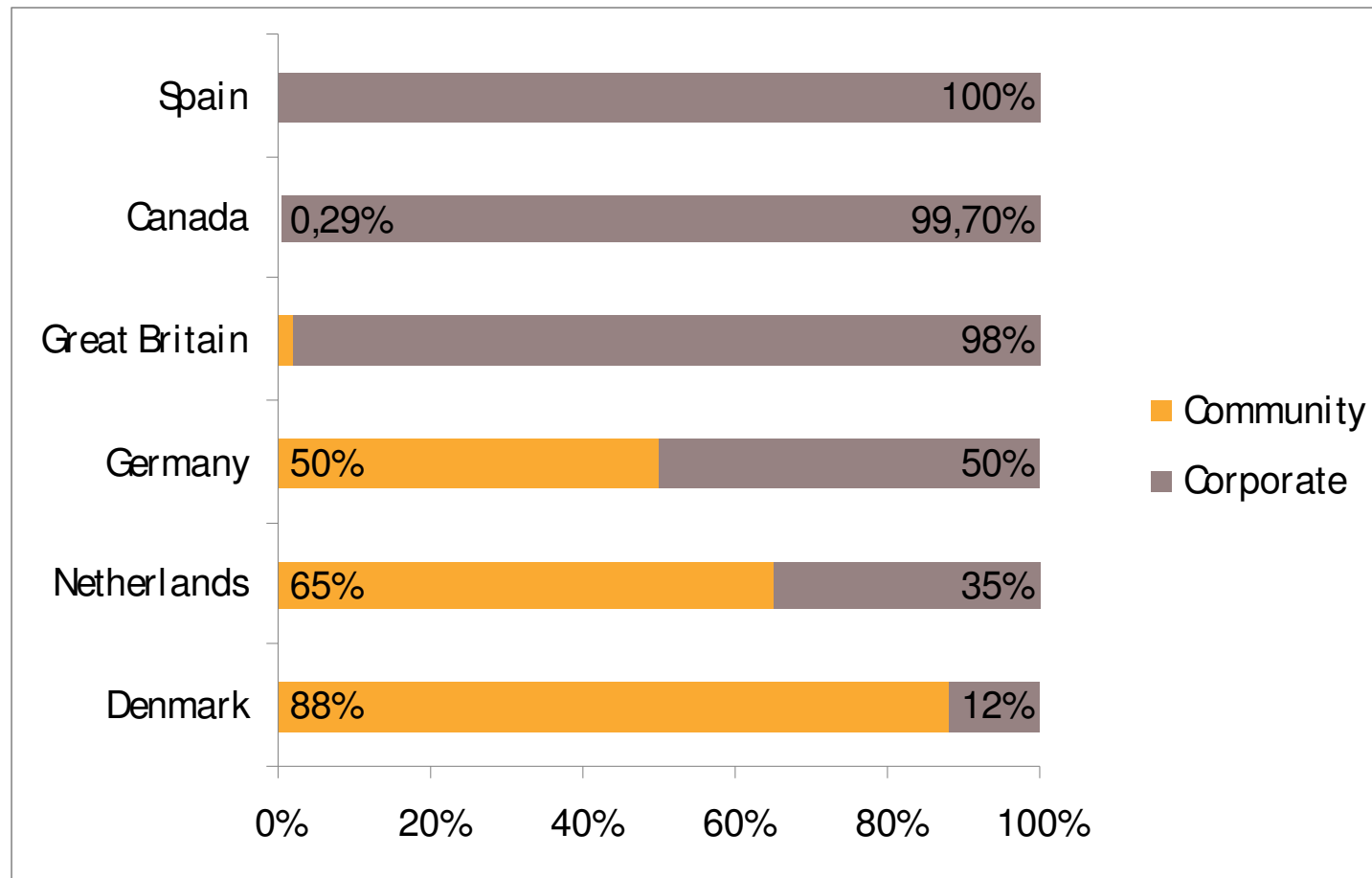


Size and capacity distribution of german wind farms





And How does that look in other Countries



Source: Paul Gipe, CanWea, D, ES, DK, NL, GB; David Toke University of Birmingham 2005,2008

Financing a community project or a corporate project are two different “beasts”



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	Corporate	Community
Size per farm	▲ 10-100+ towers ▲ 20-150+ MW ▲ \$ 50 – 400 million	▲ 1-10 towers ▲ 0.5 – 25 MW ▲ \$ 1 million to 60 million
Number of Investors	▲ Few	▲ Many
Equity	▲ Pension Funds, Utilities, IPPs, Private Equity	▲ Local citizens, municipalities, churches, Co-ops
Debt	▲ Corporate and Investment Banks	▲ Credit Unions, Savings Banks, State owned banks, Commercial Banks



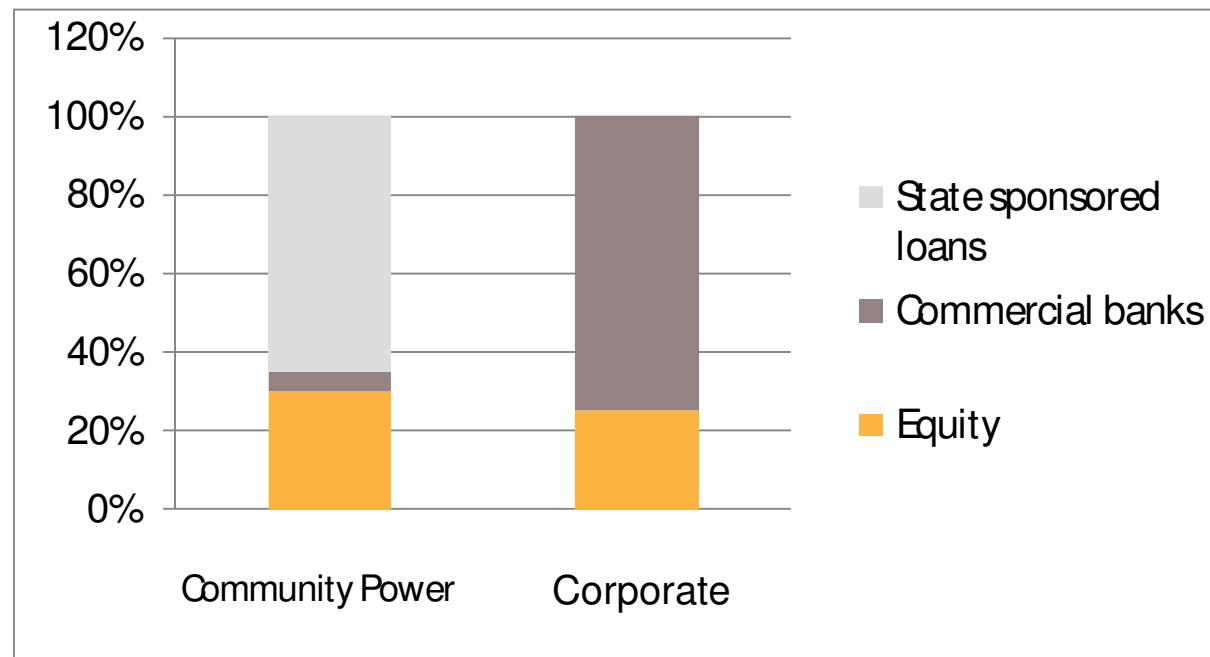
Agenda

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Financing

- ▲ **Debt:** Private commercial banks, state owned banks with preferable rates
- ▲ **Equity:** At first: Individual investors via closed funds, medium sized investment groups, cooperatives; now utilities and larger corporations, insurance companies





Financing is available

Type	Examples	Transaction Size	Term	Amortization	Collateral
Traditional Project Financing	BMO, CIBC, Manulife	> \$ 100 million	Construction plus 5, 20 years	20 years (or more if PPA longer)	Limited to Project
Canadian Corporate Banks	BMO, Scotia, TD	> \$ 10 million; > \$ 20 million	Construction plus 5 years	15-18 years	Project Corporate Guarantees if possible
Canadian Commercial Banks	BDC, RBC	> \$ 250,000	Construction plus 5 years, longer with mortgage	7-10 years, longer with mortgage	Corporate/Personal Guarantees; 1 st Mortgage
Non-Canadian Banks	Investec	> \$ 10 million	Construction plus 5 years	15-18 years	Limited to Project
Canadian Life Insurance Companies		> \$10 million	Construction plus 18 years	18 years	Limited to Project

Source: twg energy



Community power has risks...

Specific risks:

- ▲ **Limits to financing**
e.g. for off-shore projects
- ▲ Depending on number of investors, **decision making** can be difficult and **exit** can be even more difficult



General risks:

- ▲ High investment, but
 - ▶ No planning consent/permits
 - ▶ Grid access delayed or too costly if additional infrastructure is required
- ▲ Unprofitable project, because
 - ▶ Analysis (e.g. wind forecast) was too optimistic
 - ▶ Operations and maintenance becomes too expensive



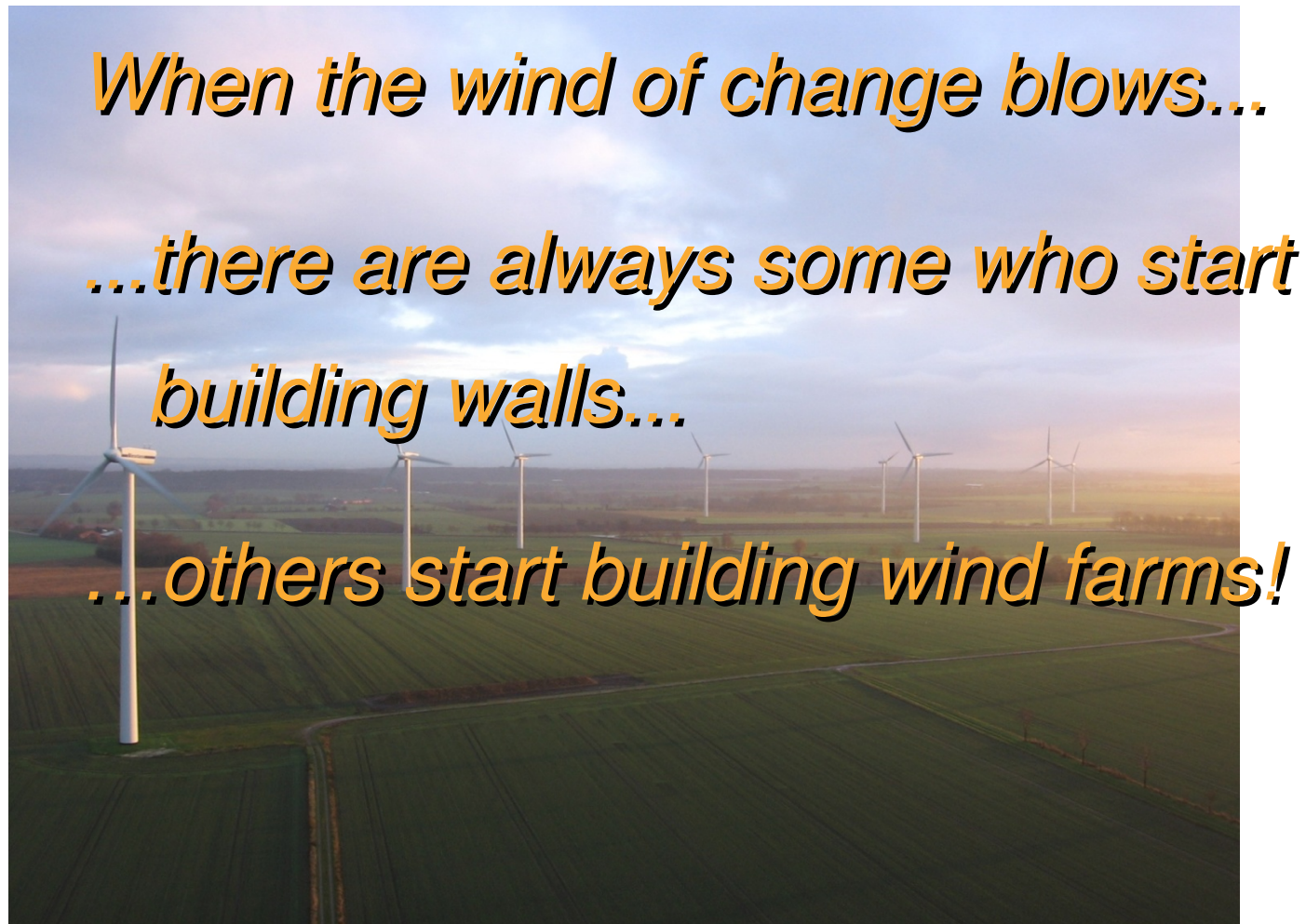
... That can be mitigated

- ▲ Create a network of support and knowledge
- ▲ Learn from comparable projects
- ▲ Employ experts as required
- ▲ Ensure access to sufficient capital
- ▲ Make allowances for bad wind years
- ▲ Choose your partners carefully use high-quality products
- ▲ Make long term maintenance contracts with availability guarantees
- ▲ **Get as much community involvement as possible (partners and owners)**





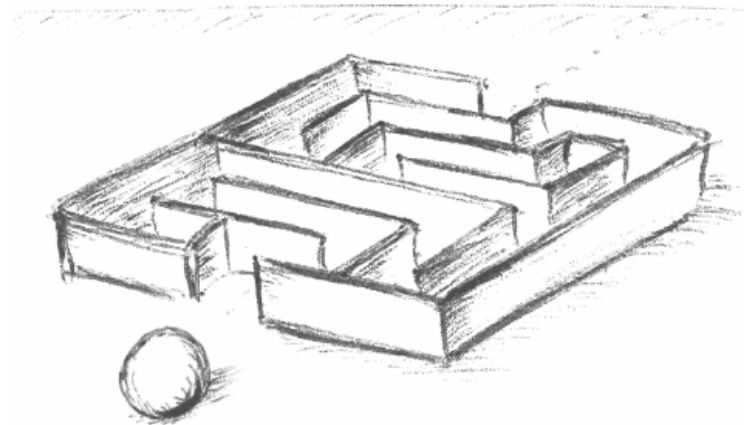
Actions





Merci – Thank You – Danke!

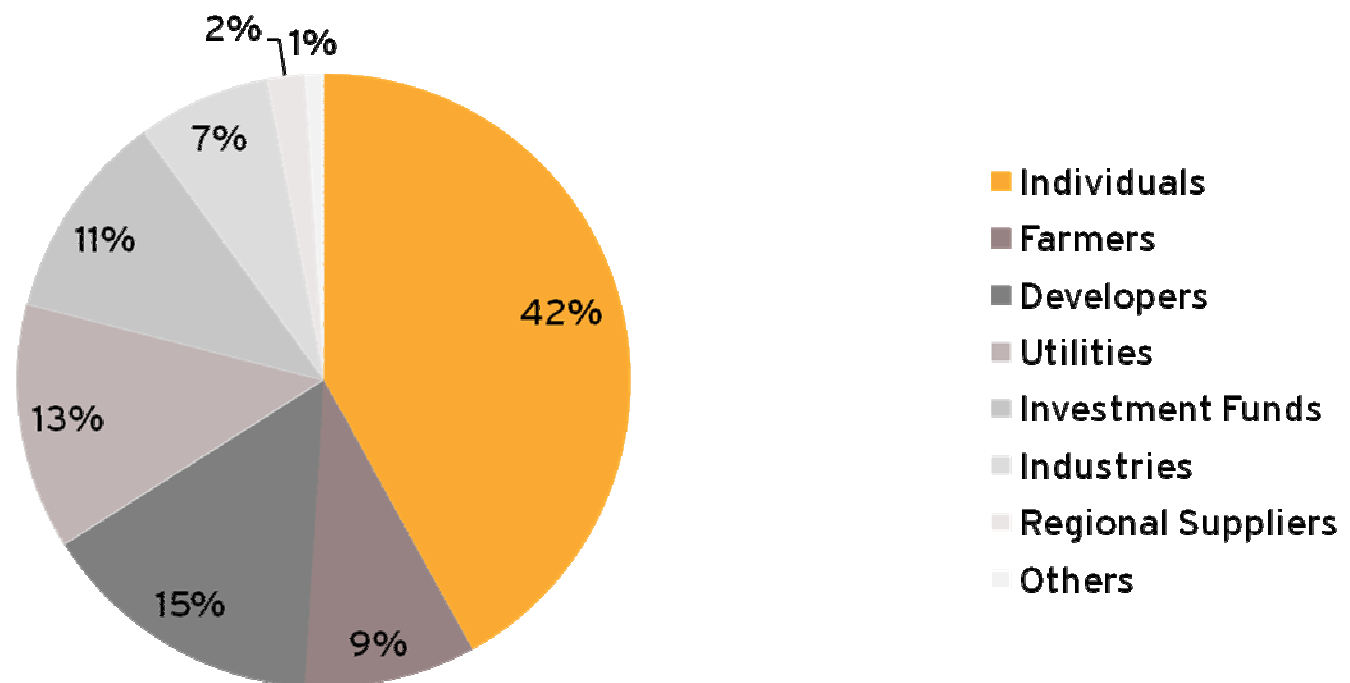
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Ownership of Renewables in Germany 2009



Source: www.unendlich-viel-energie.de; Paul Gipe, wind-works.org



Where do community projects come from

Community projects

Local groups pursuing their own community projects

Commercial developers and operators looking to receive the benefits of higher community involvement

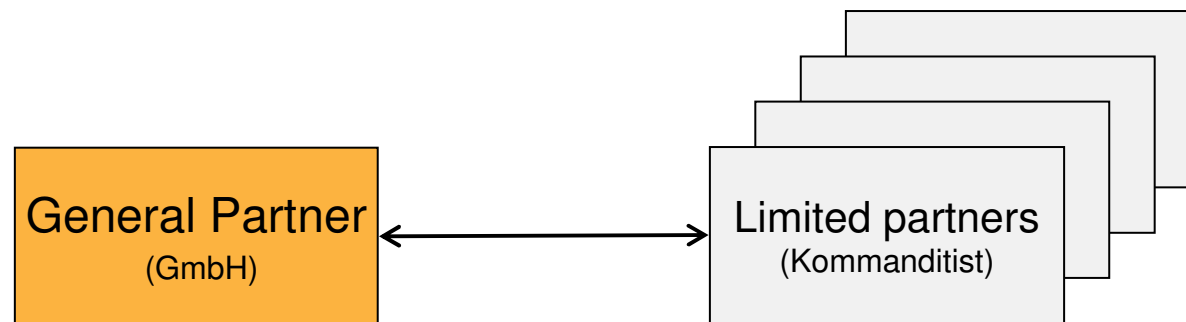
Challenges

- ▲ Limited resources to pursue project on a full-time basis
- ▲ Limited experiences with renewable energy projects

- ▲ Limited knowledge about how to involve local community
- ▲ Complex ownership structure seems to prohibit profitable exit

Legal structure and taxes

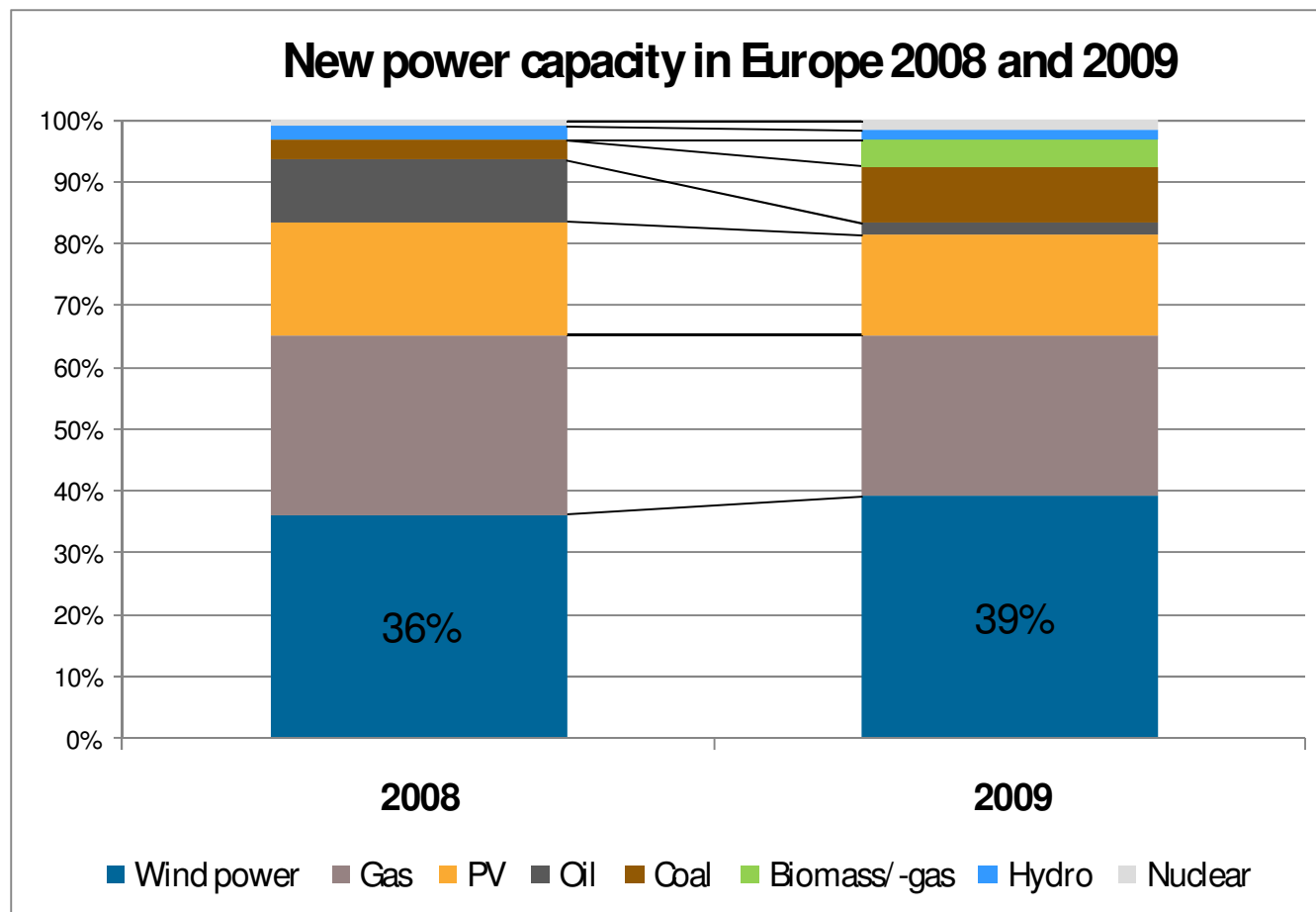
A German "GmbH & Co. KG" is a limited partnership in which the general partner is a GmbH, a private limited company.



▲ *Limited partners can deduct losses whenever they occur in personal tax statement!*

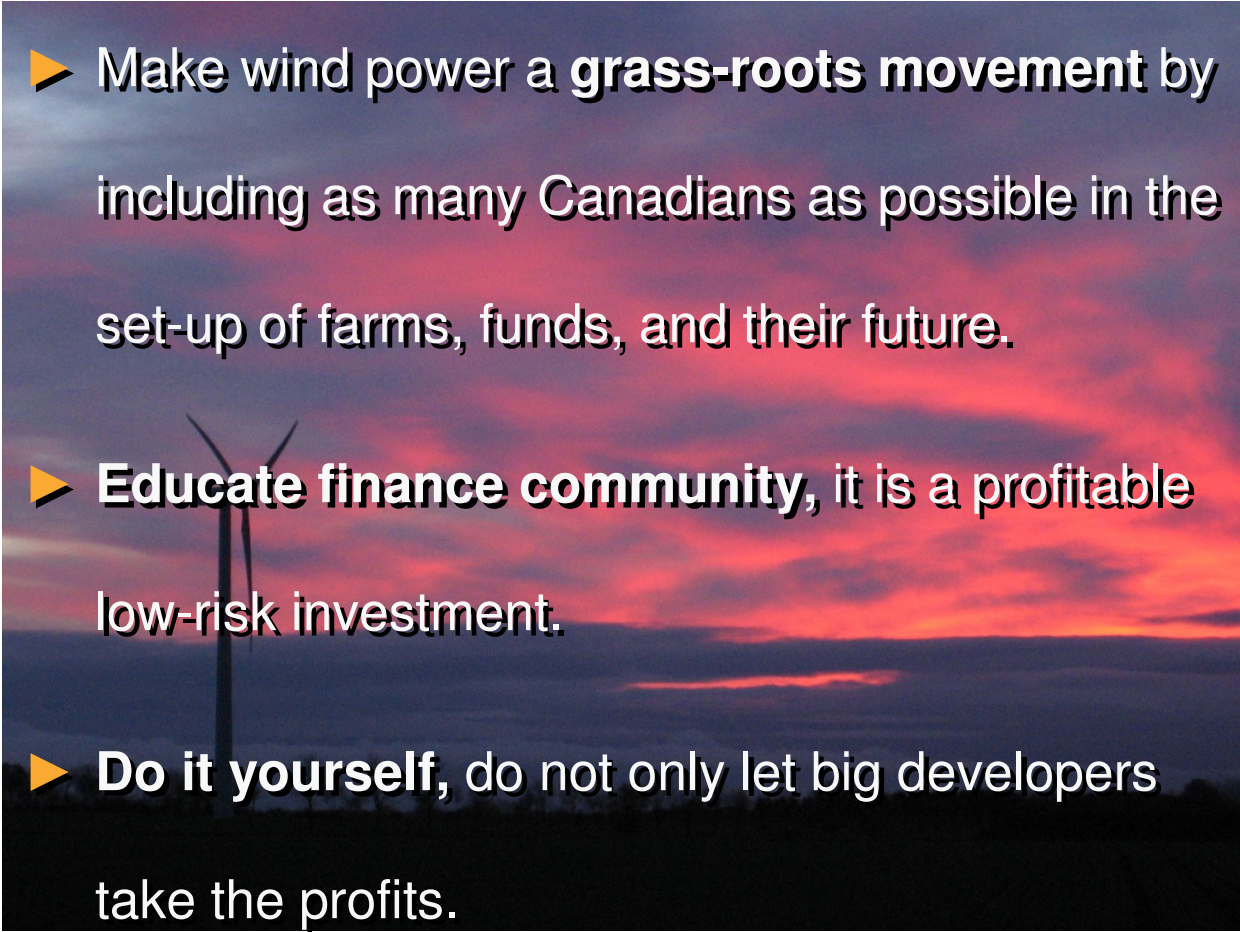


Wind power is leading new power generation capacity in Europe





Lessons for Canada

- 
- ▶ Make wind power a **grass-roots movement** by including as many Canadians as possible in the set-up of farms, funds, and their future.
 - ▶ **Educate finance community**, it is a profitable low-risk investment.
 - ▶ **Do it yourself**, do not only let big developers take the profits.