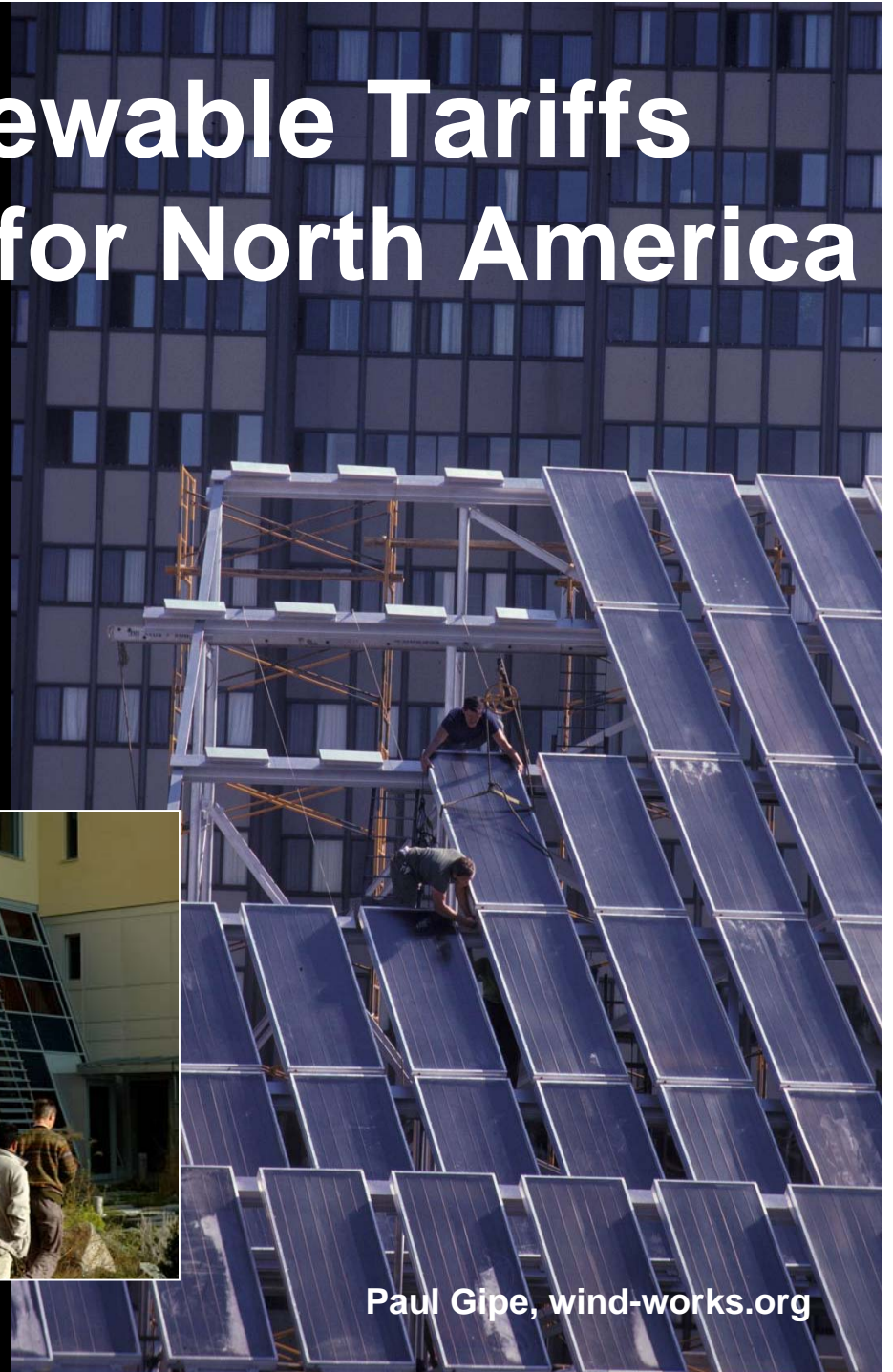


Disclaimer: The views expressed are those of Paul Gipe and are not necessarily those of the sponsor.

Disclosure: Paul Gipe has worked with Aerovironment, ANZSES, APROMA, ASES, AusWEA, AWEA, BWEA, BWE, CanWEA, CAW, CEERT, DGW, DSF, EECA, ES&T, GEO, GPI Atlantic, IREQ, KWEA, MADE, Microsoft, ManSEA, MSU, NRCan, NRG Systems, NASA, NREL, NZWEA, ORWWG, OSEA, PG&E, SeaWest, SEI, TREC, USDOE, WAWWG, WE Energies, the Folkecenter, the Izaak Walton League, the Minnesota Project, the Sierra Club, and Zond Systems, and written for magazines in the USA, Canada, France, Denmark, and Germany.

Advanced Renewable Tariffs New Policy Option for North America



Paul Gipe, wind-works.org

Lackawanna, New York

North Americans Have Been Dabbling Around the Edges of Renewable Energy Policy

Little Recognition of the Crisis Facing the Continent

Paul Gipe, wind-works.org

Complacency is Not a Policy

Inaction is Not an Option



Paul Gipe, wind-works.org

Skibsted Fjord, Denmark

North American RE Market Growth

- Exciting, Yes
- Significant, Yes
- Not Nearly Enough
by Any Standard

Paul Gipe, wind-works.org

Buffalo Ridge, Minnesota



Scale Needed: Electricity Only

- USA ~4,000 TWh/yr
- w/ 50% Cut ~2,000 TWh/yr
- @ 50% ~1,000 TWh/yr
- Avg Yield ~2 TWh/1000 MW
- = 500,000 MW of Wind
- Today: ~17,000 MW

Scale Needed: Passenger Vehicles

- 5,000 B km/yr
- 1/3 kWh/km for EV
- ~1,500 TWh/yr for EVs
- @ 50% EVs
- @ 2 TWh/1,000 MW
- ~400,000 MW

Scale Needed: USA Only

- 25%-50% Electricity Supply
- 50% Passenger Vehicle EV
- ~1,000,000 MW
- ~100 X Today!

Can It Be Done Here?

- 300,000 Heavy Trucks/yr
- ~1/2 MW/Truck
- ~150,000 MW/yr Equivalent
- Yes, It Can Be Done
- But Not At Current Pace

The US is Capable of Huge National Undertakings

Cleveland, Ohio

- TVA, BPA, WPA
- Civil Rights
- Anti-Smoking
- War



Paul Gipe, wind-works.org

Swords into Wind Turbines

- **Direct Cost of Iraq War ~\$600 B**
- **Direct Purchase Cost**
~15% Penetration, or
- **Tariff Payment Cost**
~20% Penetration!

<http://www.wind-works.org/articles/costofiraqwarandwind.html>

Paul Gipe, wind-works.org



Aggressive Targets Require Aggressive Measures

Ferndale, Ontario

German Renewable Energy Targets

	2010	2020	2030
Electricity	12.5%	27%	45%



Public Acceptance Critical

- **Acceptance Necessary**
For Continued Political Support
- **As Renewables Grow**
Entrenched Players Threatened
- **Organized Opposition Grows**
Coal & Nuclear Industry
Far Right

No to Windmills



Building Acceptance

- **Must Share Opportunity**
- **Public Must Participate**
- **For Renewables To Reach Their Potential**

Paul Gipe, wind-works.org

Schauinsland, Germany

Advanced Renewable Tariffs

- **Deliver More Capacity--**
 - More Quickly
 - More Equitably
- **By Enabling Participation**
 - Everyone



Advanced Renewable Tariffs

A Question of Equity

- **Feed Laws are Fair**
- **Nearly All Can Play**

Farmers, Ranchers, First Nations, & Co-ops

Renewable Tariffs in North America .. Unthinkable?

- Yes--Just 4 years ago
- Today? No
- Now Possible

Paul Gipe, wind-works.org

WindShare, Toronto



The Mood Has Changed

- Ontario Moved First
- Now Growing Trend
in both USA & Canada



Paul Gipe, wind-works.org

Montfort, Wisconsin

Advanced Renewable Tariffs North American Endorsements

- David Suzuki Foundation
- Pembina Institute
- Liberal Party of Ontario
- NDP of Canada
- Greenpeace (USA & Canada)
- Bill McKibben, Denis Hayes,
Anne Ehrlich . . . and many more

Ontario's Standard Offer Program

The Most Progressive Renewable
Energy Policy in North America
in Two Decades



Paul Gipe, wind-works.org

Goderich, Ontario

Why?

- **All Renewables**
Most Anyway
- **Open To All Players**
In Theory Anyway
- **Differentiated Tariffs**
Two (Solar & Everything Else)
Highest Tariffs in North America
- **Simplified Contracts**

Grassroots Movement Has Begun

- **Explosion of Interest**
- **Groups Active Across Canada**
- **Local Groups Now Active Across US**
Most Within the Past 3 Months!
- **Public Out in Front**
Demands Aggressive Action
- **Tipping Point Reached?**

Challenges in North America

- **Piecemeal Approach (CA)**
Too Slow for Scale Needed
- **Existing Policy Momentum**
RPS for Wind, Subsidies for Solar
- **Ignorance**
Germany Uses RPS, Right?
- **Ideological**
Market-Non Market Debate
- **Cheap Energy Contract**

How To Get There

- **Need New Champions**
- **Need EnNGOs On Board**
- **Need Labor Support**
- **Need Political Champions**
 - Governor's or Premier's Office**
 - Political Party Leaders**

Paul Gipe, wind-works.org



Ferndale, Ontario

Renewable Tariffs Are In Play

- British Columbia
- Michigan HB 5218
- Illinois
- Minnesota & Rhode Island
- California--Feed-in Fever
- US House & US Senate

Paul Gipe, wind-works.org



Myths to Dispel

- Renewables are Free
- Renewables are Cheap
- Renewables Can't Be Added Quickly
- Renewables Can't Make a Difference
- Net Metering Works

Paul Gipe, wind-works.org

Husum, Germany

If We Use a Market Model, Then

- You Get What You Pay For
- If You Want It You Must Pay For It
- Difference Between Cost & Price
Margin Determines Rate of Growth
- High or “Premium” Prices Deliver
More Generation More Quickly and More Jobs

Political Price-Political Quantity Market Mechanisms

	Price	Quantity
Feed Law	Political	Market
Quota/RPS /Tendering	Market	Political

Both are Market Mechanisms

Barriers to Renewable Tariffs

- **Philosophical: Cost vs Value**
- **Sticker Shock**
 - Imbedded Costs & Heritage Resources
 - NG: Future Pricing
 - Nuclear Estimates & Reality
 - Wind: “Too Cheap to Meter”
- **Unfamiliarity**
- **US Tax Subsidies (PTC)**
- **Hard to Write a Press Release!**

State & Provincial Action Required

- **Can't Wait for Federal Action**
Limited Federal Role
- **Can't Rely on Federal Subsidies**
Ottawa Deadlocked
Washington Deadlocked (for now?)
- **Policies Must Be Independent**
Without Federal Subsidies First
By Statute
With Federal Subsidies Later
By PUC Rulemaking

Strategy--Hybrids

- **Washington State**
Tariffs for Domestic Products Only?
- **Distributed Generation Only?**
Voltage Caps?
- **Project Size Caps?**
20 MW in California?



Strategy--Operating in Parallel

- **Run Alongside Existing Programs**
With RPS & Solar Subsidies
- **Don't Disrupt Existing Markets**
We Need All Renewables As Quick As Possible
- **Build Track Record**
- **Renewable Tariffs**
for Meeting RPS Target

Move From Nation of Consumers to Nation of Producers

Paul Gipe, wind-works.org

Lackawanna, New York



From Consumer Culture to Culture of Conservation

--Ontario Premier Dalton McGuinty

Paul Gipe, wind-works.org

Montfort, Wisconsin

We Need More Wind . . .

Matane, Quebec



Paul Gipe, wind-works.org

Hinesburg, Vermont

... And More Solar



Paul Gipe, wind-works.org

Gaspé Peninsula, Quebec

No Time for Half-Measures

No Time to Lose

Paul Gipe, wind-works.org



**Renewables:
When You Look
Closely . . .
. . . Worth Every
Cent**

Paul Gipe, wind-works.org



Renewable Tariffs-- New Policy Option for North America

www.wind-works.org

Manawatu Gorge, New Zealand

