

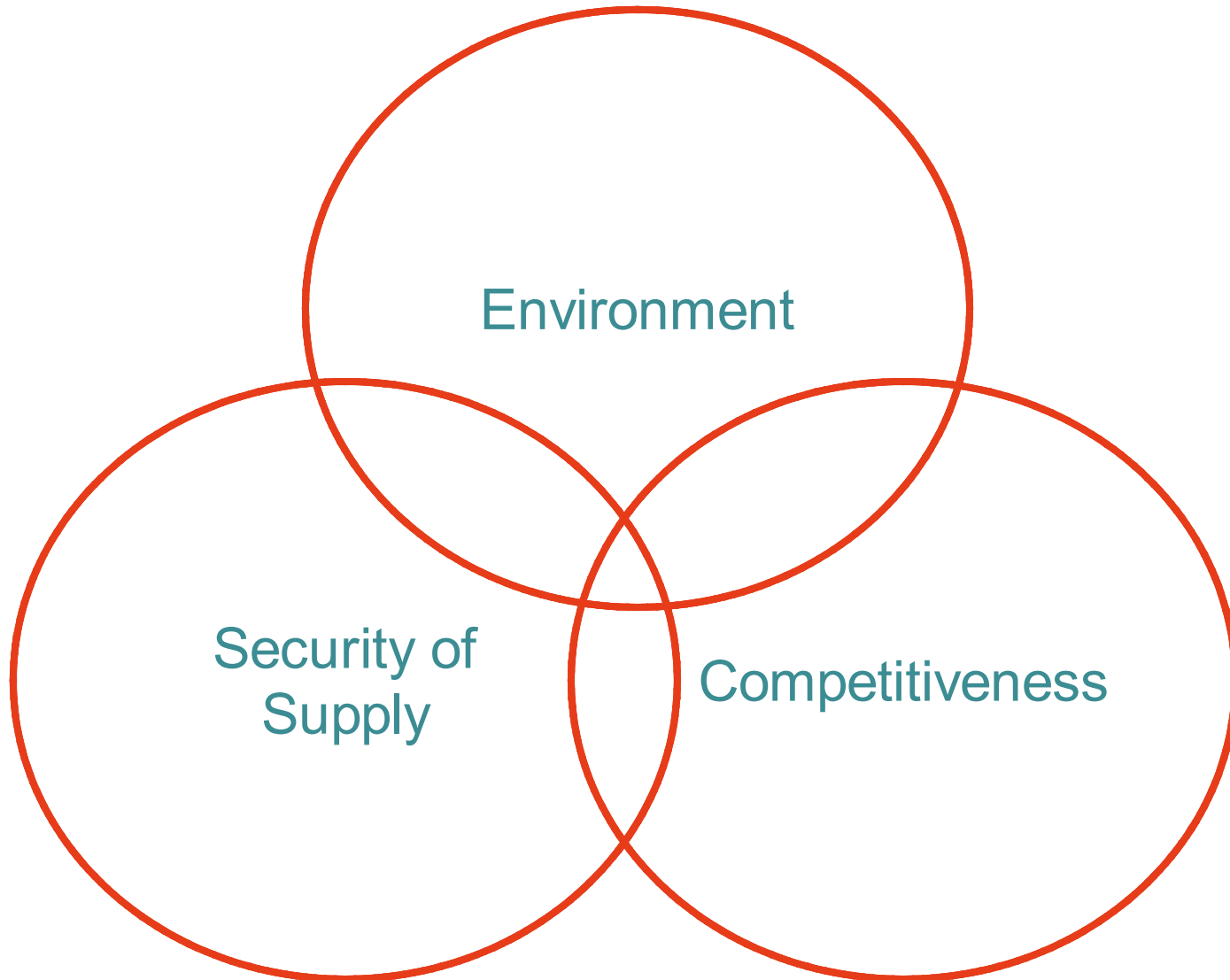
Wind Energy Policy Context

**Wind Energy Workshops
Southwest and Northwest
July 7th and 8th 2010
John Mc Cann SEAI**



Renewable Energy Policy

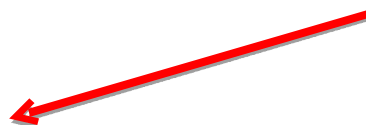
3 Pillars of Sustainable Energy Policy



EU Directive 2009/29/EC EU Decision 406/2009/EC

- EU GHG Directive Targets

$$\begin{array}{rcccl} \text{GHG 20\% below} & & \text{ETS GHG} & & \text{Non-ETS GHG} \\ \text{1990 by 2020} & = & \text{21\% below} & + & \text{10\% below 2005} \\ & & \text{2005 by 2020} & & \text{by 2020} \end{array}$$



- EU Mandatory GHG Target for Ireland
 - Non-ETS GHG 20% less than 2005 by 2020

The 20-20-20 EU Policy

By 2020

-20%



GREENHOUSE
GAS LEVELS

-20%



ENERGY
CONSUMPTION

+20%



RENEWABLES IN
ENERGY MIX

- Mandatory Targets for Ireland
 - 16% RES - Energy by 2020
 - also 10% RES-Transport by 2020
- “*gross final consumption of energy*” - including losses of electricity and heat in distribution
- $GFC = TFC (\text{Transport}) + GFC (\text{Elec}) + GFC (\text{Heat})$
- Co-operation mechanisms
 - Enables trading of compliance with other member states
 - Enables purchase from outside the EU with matching physical import

National Policies – White Paper



10%
10% Electric

Biofuels
Obligation



12%

Greener Homes
Reheat
Building Regs



40%
500MW Ocean
400MW Biomass

REFIT
Building Regs

All energy target 16%

National Renewable
Energy Action Plans

Bioenergy Working
Group Report

Renewable Sourced Electricity (RES-E) Targets

- *2010 RES-E Target:*
 - 13.2% of consumption - EU Directive 2001/77/EC
 - Increased by Irish Government to 15%
 - 15% equates to approximately 3.7 TWh/yr
 - Progress December 2009: 14.4% RES-E
- *Target to 2020:*
 - 40% of consumption
 - Equivalent to estimated 5,800 MW renewable capacity
 - Additional 4,400 MW required

National Renewable Energy Action Plan

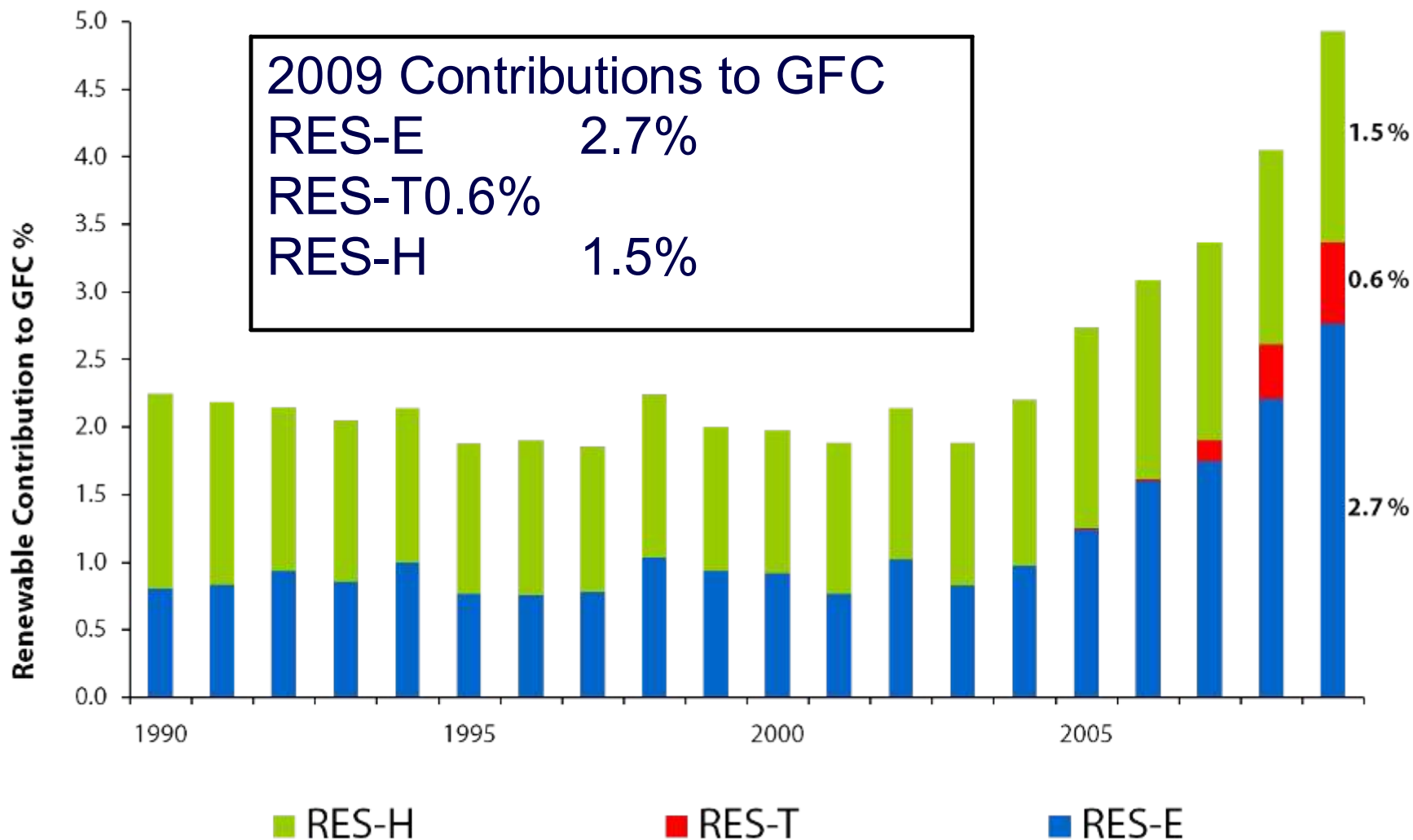
- Report to be submitted to the European Commission detailing how Ireland will meet the 16% target
 - Only policies and measures legislated for can be included
 - Must give projection of trajectory to achieve target
 - Must Indicate use of “co-operation mechanisms”
- Pre-submission December 2009
- Draft plan circulated for consultation to stakeholders
- Submission of final plan to EC imminent

Key Measures Underpinning RES-E Policy Delivery

- Planning
 - RE Planning Guidelines and Exemptions
 - Strategic Infrastructure Act
 - Zoning of RE in County Development Plans
- Financial
 - REFIT Scheme
- Grid Access
 - Group Processing Scheme Gates 1, 2 & 3
 - Eirgrid Grid 25 Plan

Progress

Contribution to targets by energy markets

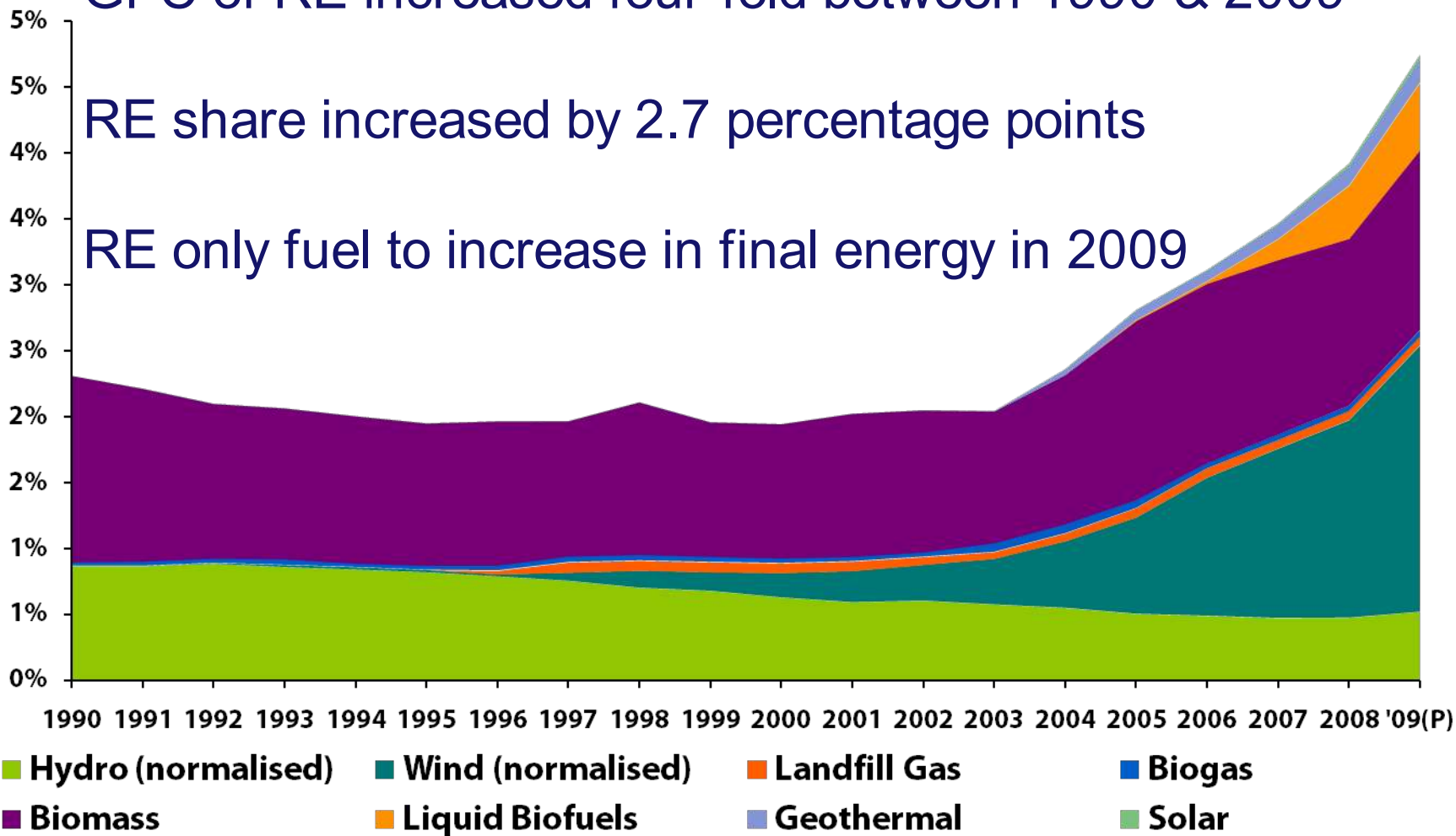


RE by Fuel as % of GFC

GFC of RE increased four-fold between 1990 & 2009

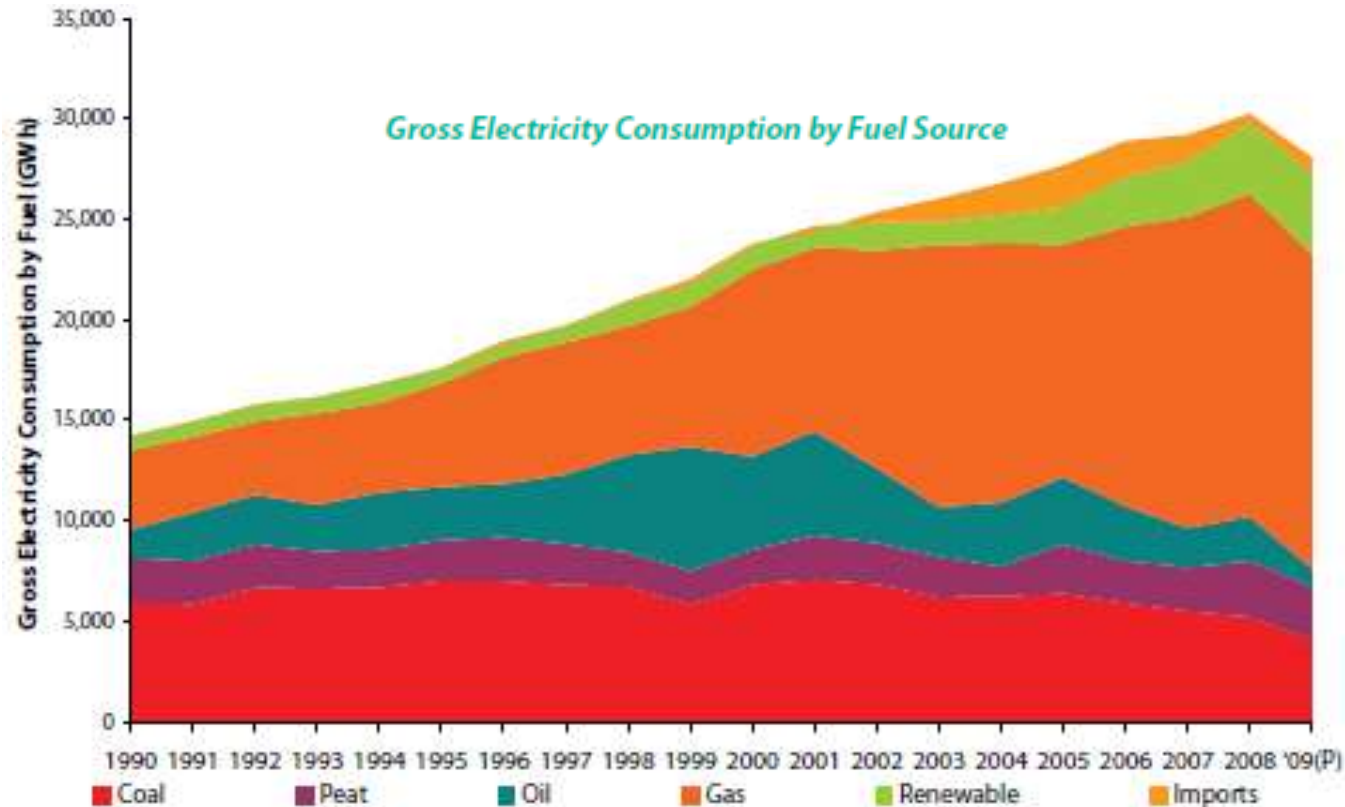
RE share increased by 2.7 percentage points

RE only fuel to increase in final energy in 2009

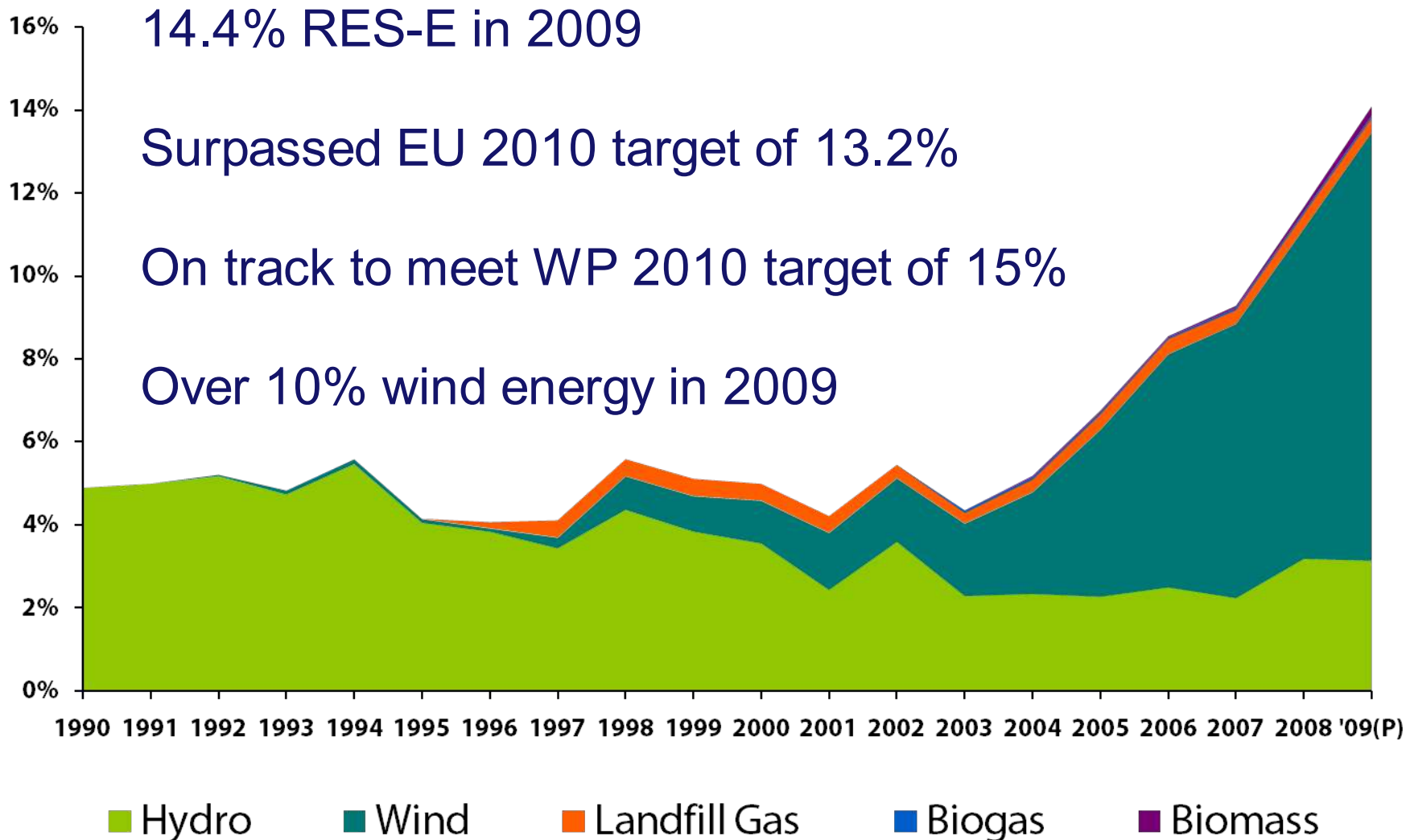


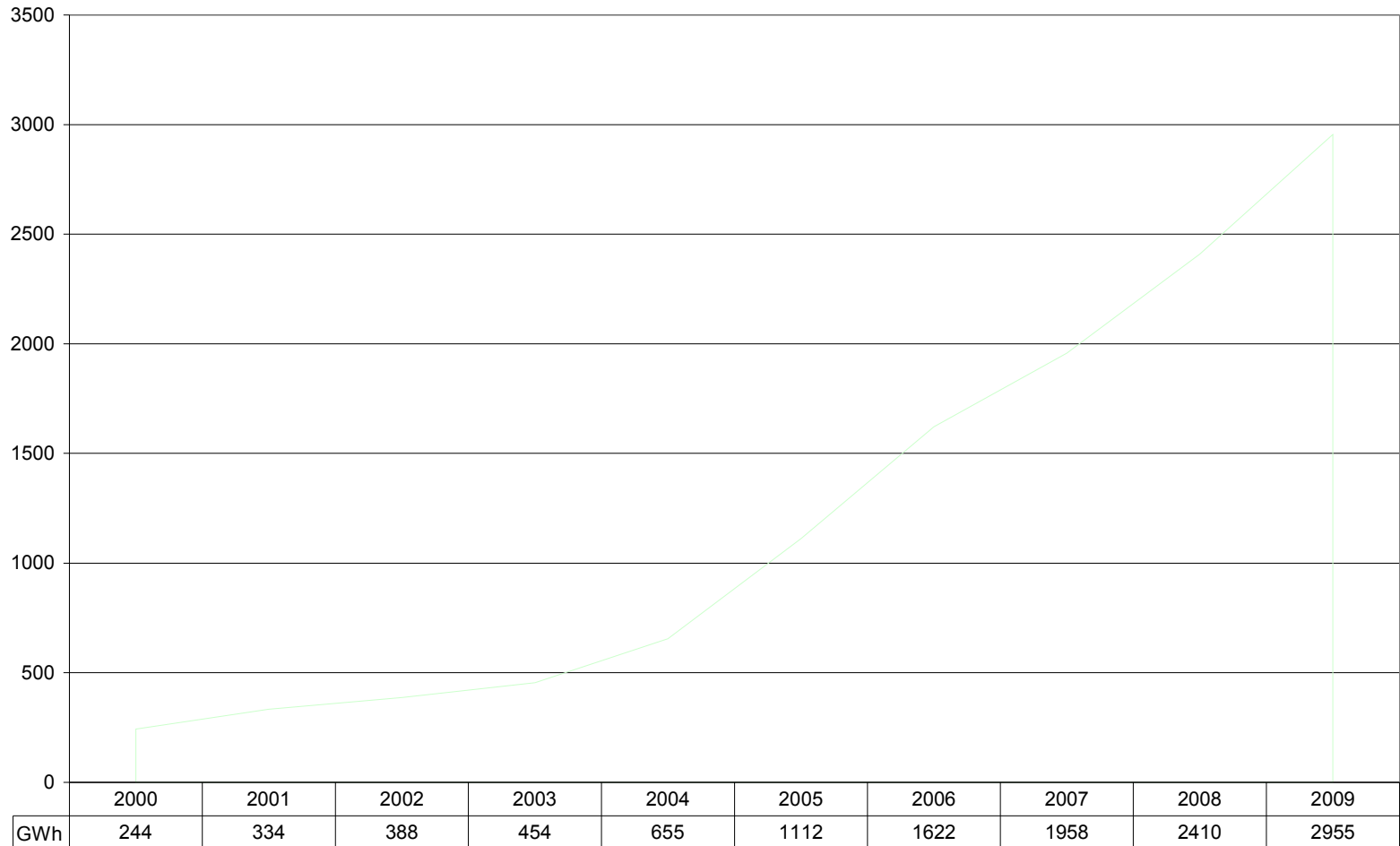
Provisional Electricity Fuel Mix 2009

Gas	55.6%
Coal	14.5%
Renewable	14.4%
Peat	9.5%
Oil	3.3%
Imports	2.7%



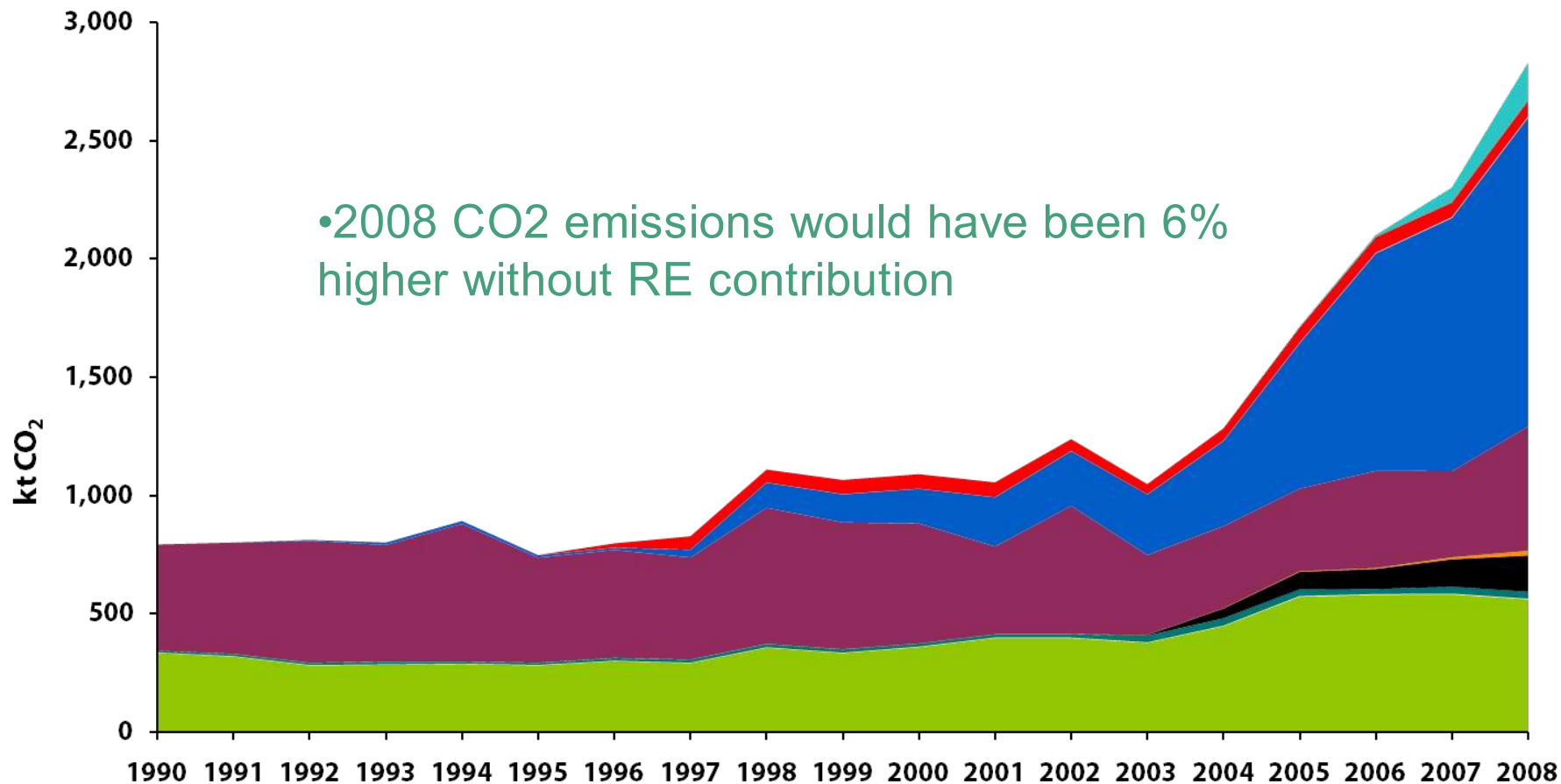
Source: SEAI @ May 2010





Source: SEAI @ May 2010

Avoided CO₂ Emissions



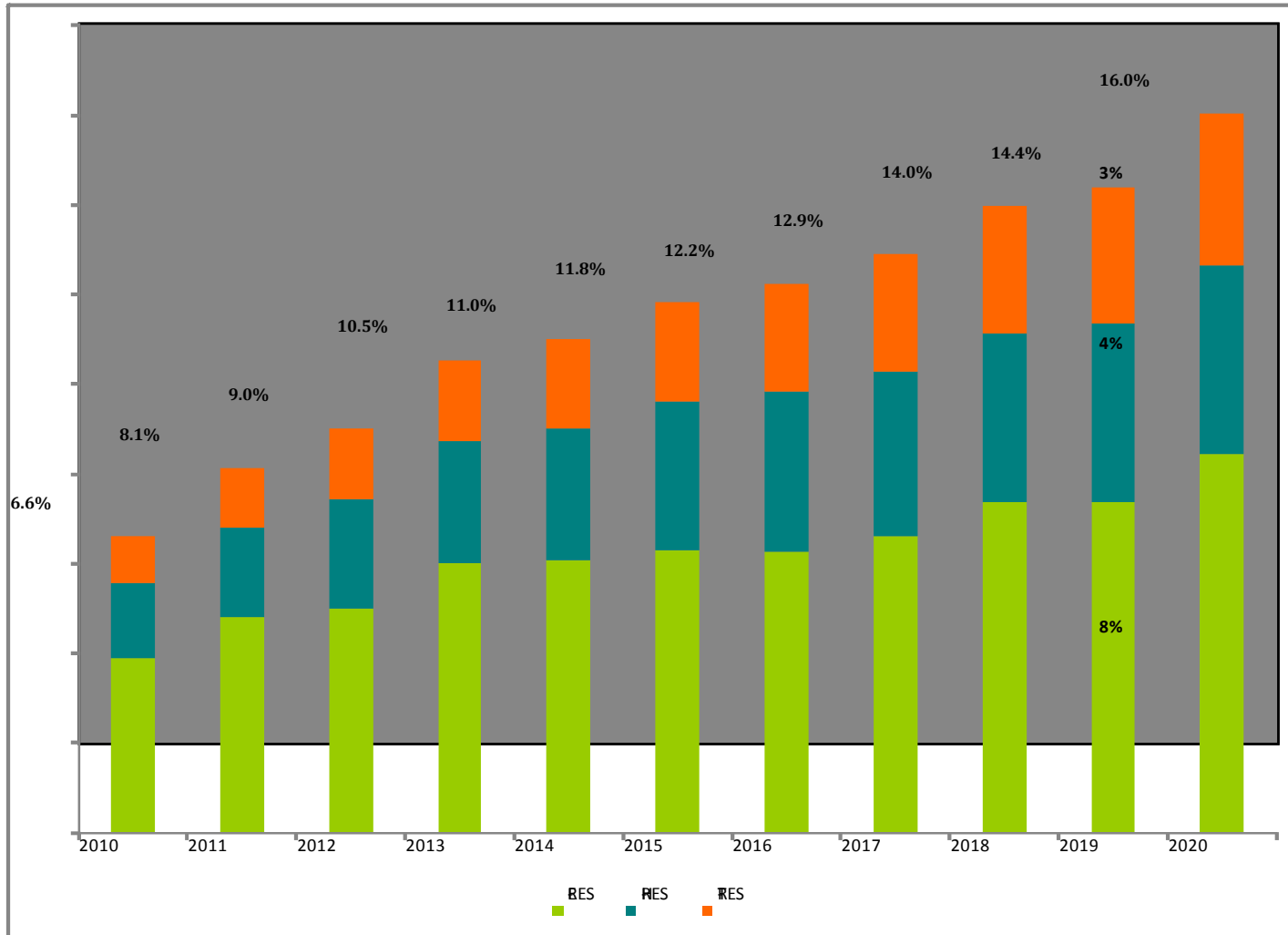
Progress Towards Targets

	Targets			
	2008	2009 (Provisional Data)	2010	2020
Renewable Electricity (RES-E)	11.9%	14.4%	15%	40%
Renewable Transport Energy (RES-T)	1.2%	1.5%	3%	10%
Renewable Thermal Energy (RES-H)	3.6%	3.9%	5%	12%
Overall	3.9%	4.7%	-	16%

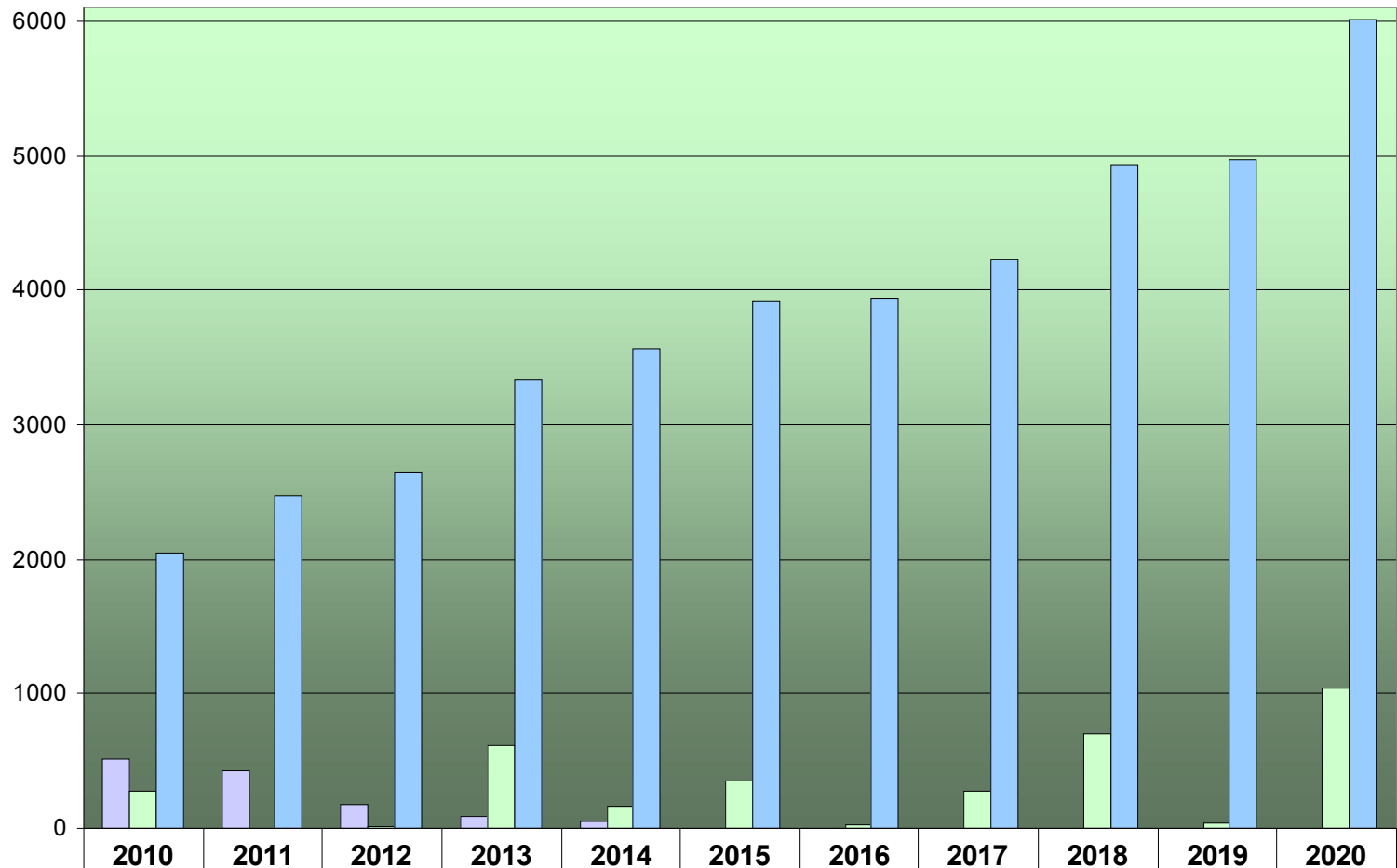
	Market Share	Renewable Energy Share	2010 Target	2020 Target	Contribution to Overall 16% GFC target
Transport	40%	1.5%	3%	10%	4%
Thermal	39%	3.9%	5%	12%	4%
Residential	48%	25% of RES-H	-	-	
Industry	30%	66% of RES-H	-	-	
Services & Agriculture	22%	9% of RES-H	-	-	
Electricity	19%	14.4%	15%	40%	8%

The Future 2010 – 2020

2020 Combined RE Development Trajectory



Indicative Firm Grid Access Quantities 2010-2020



Gate 2	516	422	170	82	54	0	0	0	0	0	0
Gate 3	271	0	8	613	163	351	30	282	708	43	1036
Rolling Total	2049	2471	2649	3344	3561	3912	3942	4224	4932	4975	6011

Renewable Electricity Mix and Pipeline

Renewable (MW)	Connected		Contracted	Gate 3	Applications
Wind	1379	84%	1257.9	3995	11259
Hydro	237.1	14%	0.4	0	0.7
Solar	0.1	0.01%	0	0	0
Tidal	0	0%	0	0	36
Biogas/Landfill Gas	34.1	2%	4.5	0	29
Biomass	0	0%	21	0	0
		Connecting	2010-'14	2010-'20	????

- 1379 MW connected
- +5 GW through Gate 3
- 4GW wind gets to 40%

- Challenges
 - Planning
 - Delivery of connections
 - Major grid upgrade
 - Access to finance
 - Managing variability



Conclusion

- Renewable electricity will contribute ~50% of Ireland's 2020 target of 16% renewable energy contribution to GFC
- Wind Energy has played, and will continue to play, a major role in delivering Ireland's GHG renewable energy targets
- The planning process is a key enabler for both wind farm development and the associated grid infrastructure
- The purpose of the SEAI workshops is to highlight the critical role of planning in enabling achievement of renewable energy targets

Thank You

