



solutions for europe

**natural refrigerants**

16-17 March 2015 in Brussels

# Elements for a successful phase-out of HFCs under the Montreal Protocol

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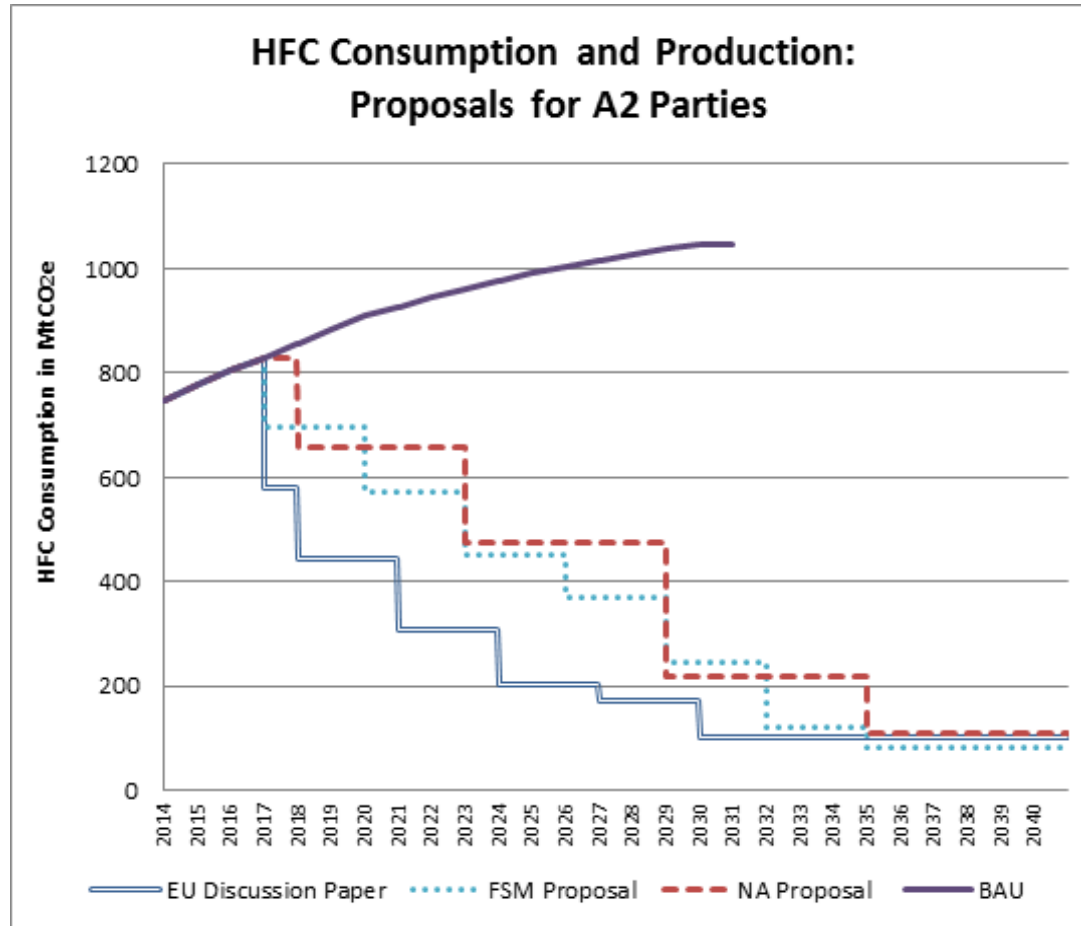
[www.eia-international.org](http://www.eia-international.org)



# Structuring a phase-down

- Baseline
- Freeze date
- Reduction schedule
- Production vs Consumption
- Differentiated schedules for A5 (developing) and non-A5 (developed) countries
- Availability of data on HFC consumption and production

# Proposals for developed (A2) countries



# Proposals for A5 countries

HFC CO <sub>2</sub> e Consumption and Production in A5 Parties		
	FSM Proposal	NA Proposal
Baseline	Average of HCFC consumption in 20XX-20XX	Average of HFC consumption plus 40% HCFC consumption in 2011-2012
Reduction Schedule	20XX: 85%	2020: 100%
	20XX: 70%	2025: 70%
	20XX: 55%	2031: 40%
	20XX: 45%	2045: 15%
	20XX: 30%	
	20XX: 15%	
	20XX: 10%	

EU Discussion Paper		
HCFC-HFC CO <sub>2</sub> e Consumption in A5 Parties		
	Commitment	Complementary Action
Baseline	Average of combined HCFC-HFC CO <sub>2</sub> e consumption in 2015-2016	Data collection on HFC consumption in 2015-2016 for purposes of establishing baseline
HCFC-HFC CO <sub>2</sub> e Freeze	Freeze <b>combined HCFC-HFC CO<sub>2</sub>e</b> consumption in 2019	
Reduction Schedule	Negotiate reduction schedule in 2017 or 2018 for combined HCFC-HFC CO <sub>2</sub> e consumption	

HFC Production in A5 Parties		
	Commitment	Complementary Action
Baseline	Average of HFC CO <sub>2</sub> e production in 2009-2012 plus 70% HCFC CO <sub>2</sub> e production in 2009-2010	Data collection on HFC production in 2009-2012 for purposes of establishing baseline
HFC Freeze	Freeze <b>HFC CO<sub>2</sub>e</b> production in 2019	
Reduction Schedule	Negotiate reduction schedule in 2017 or 2018 to reduce HFC CO <sub>2</sub> e production to 15% by 2045	

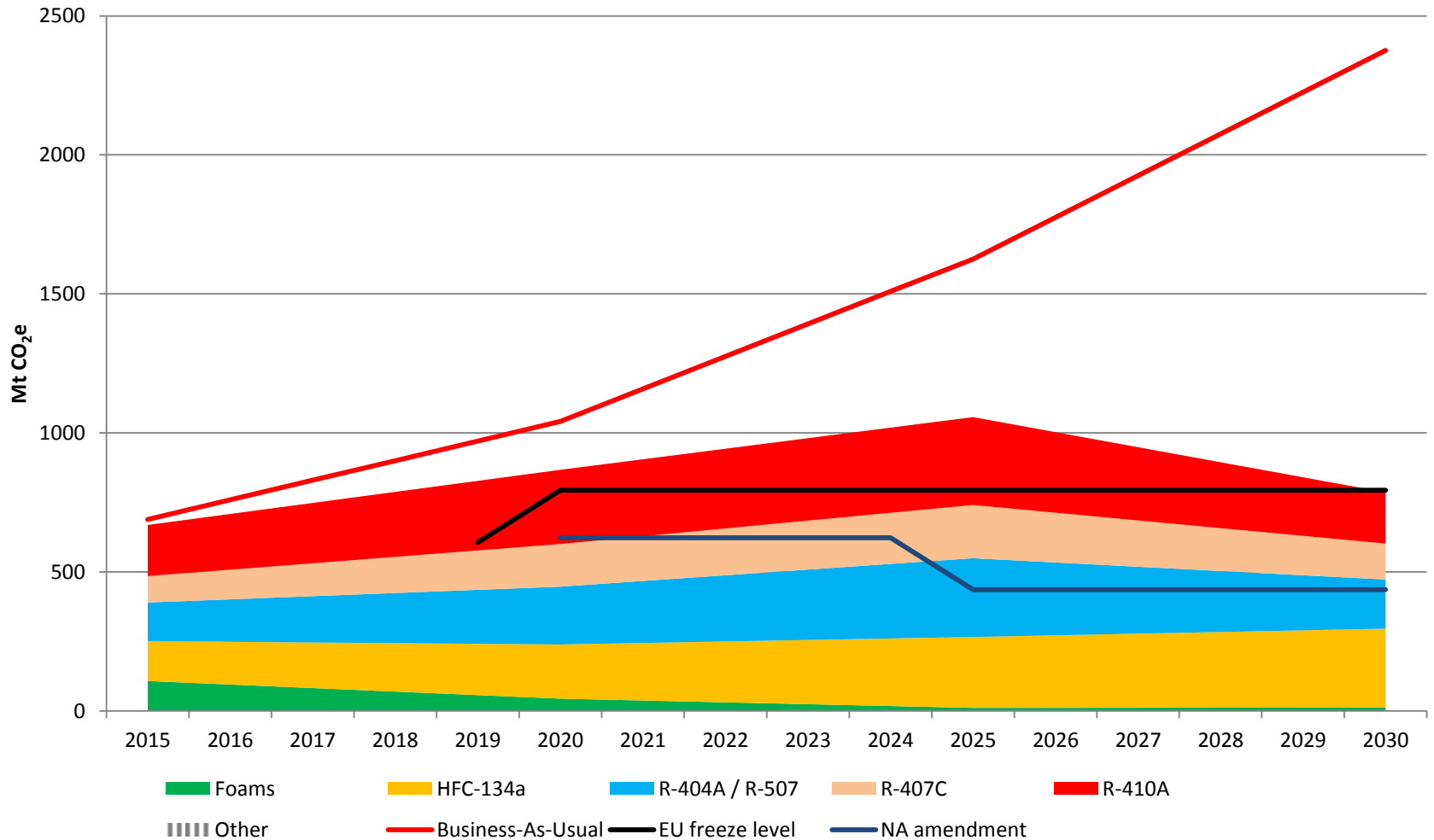
# TEAP Mitigation Scenarios



MIT 2 scenario A5	
MAC	R134a = 0% for new equipment, replaced by GWP1 from 2017 No servicing changes
Domestic refrigeration	R134a = 0% for new equipment, replaced by GWP1 from 2020 No servicing changes
Commercial, transport, industrial refrigeration	R404A – 0% for new equipment, replaced by GWP < 300 by 2020 No change in servicing  80% of CO <sub>2</sub> e of sale R404A retrofit by GWP <300 from 2030
Stationary air-conditioning	R404A = 0% for new equipment replaced by GWP <700 from 2020

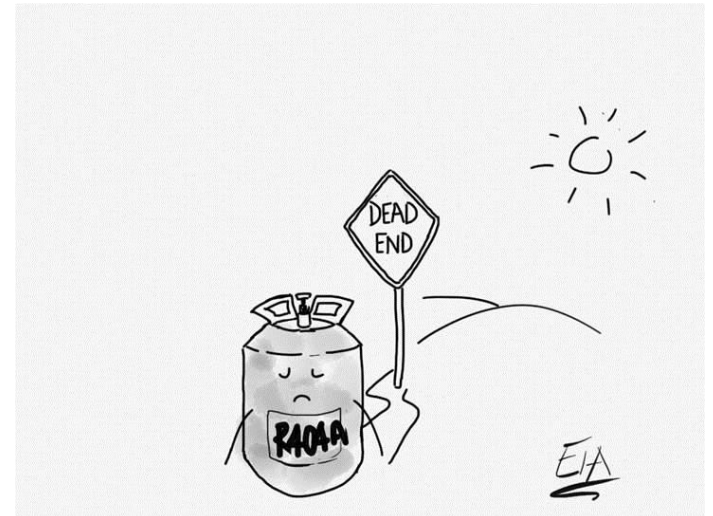
*TEAP – the Technology and Economic Assessment Panel of the Montreal Protocol has modelled two mitigation scenarios for A5 countries. For the RAC sector they propose variable dates for the prohibition of the use in new manufacturing of certain high-GWP HFCs.*

# Comparison of A5 proposals with MIT2



# Other Issues to Consider

- Standards preventing uptake of HFC-free solutions
- Financing
- Technology transfer and financing mechanism of the Montreal Protocol – the MLF
- Consider other measures – bans on certain chemicals?



# Conclusions

- Montreal Protocol has many successes and some failures – we can learn from them;
- Unitary AC is key sector but a lot can be done with early action on foams and refrigeration;
- Developed countries need to lead by example – an ambitious A2 schedule will ensure swift market uptake of climate-friendly solutions;
- More data on HFC use and production is needed to negotiate proposals;
- The Natural Refrigerant industry in Europe has key role to play – in revising standards and balancing the debate at Montreal Protocol.





Lets get off the chemical treadmill...!!



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Thank you very much!