











**A Call for Urgency and Accountability:  
The Global Warming Solutions Act**

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# HALF A DEGREE OF WARMING MAKES A BIG DIFFERENCE:

*EXPLAINING IPCC'S 1.5°C SPECIAL REPORT*

	1.5°C	2°C	2°C IMPACTS
<p><b>EXTREME HEAT</b> Global population exposed to severe heat at least once every five years</p>	 <p><b>14%</b></p>	 <p><b>37%</b></p>	<p><b>2.6x</b> WORSE</p>
<p><b>SEA-ICE-FREE ARCTIC</b> Number of ice-free summers</p>	<p>AT LEAST 1 EVERY <b>100 YEARS</b></p> 	<p>AT LEAST 1 EVERY <b>10 YEARS</b></p> 	<p><b>10x</b> WORSE</p>
<p><b>SEA LEVEL RISE</b> Amount of sea level rise by 2100</p>	 <p><b>0.40</b> METERS</p>	 <p><b>0.46</b> METERS</p>	<p><b>.06M</b> MORE</p>
<p><b>SPECIES LOSS: VERTEBRATES</b> Vertebrates that lose at least half of their range</p>	 <p><b>4%</b></p>	 <p><b>8%</b></p>	<p><b>2x</b> WORSE</p>
<p><b>SPECIES LOSS: PLANTS</b> Plants that lose at least half of their range</p>	 <p><b>8%</b></p>	 <p><b>16%</b></p>	<p><b>2x</b> WORSE</p>

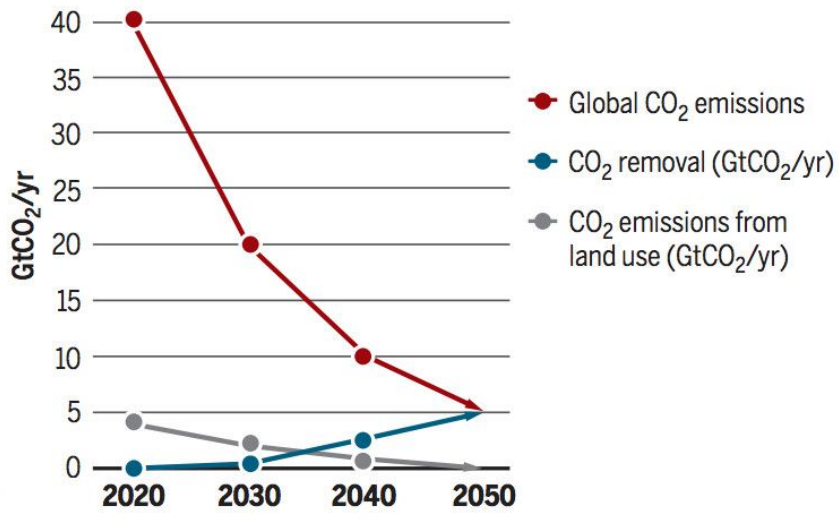
## **IPCC :**

- The current amount of warming since “pre-industrial,” just over 1°C.
- 1.5°C change is unavoidable at this point.
- To have a 50% chance of avoiding this more dangerous 2°C increase, we must reduce GHG emissions (Net Carbon Debt) by 50% by 2030, and on to zero by 2050.
- BEYOND 2°C: The unknowns increase. Threshold temperature for numerous major geochemical drivers-
  - Ice cap melting
  - Changes to major ocean current systems
  - Increasing emissions of methane from permafrost
  - Absorbing of solar input, instead of reflecting off frozen ice

## **PARIS ACCORD**

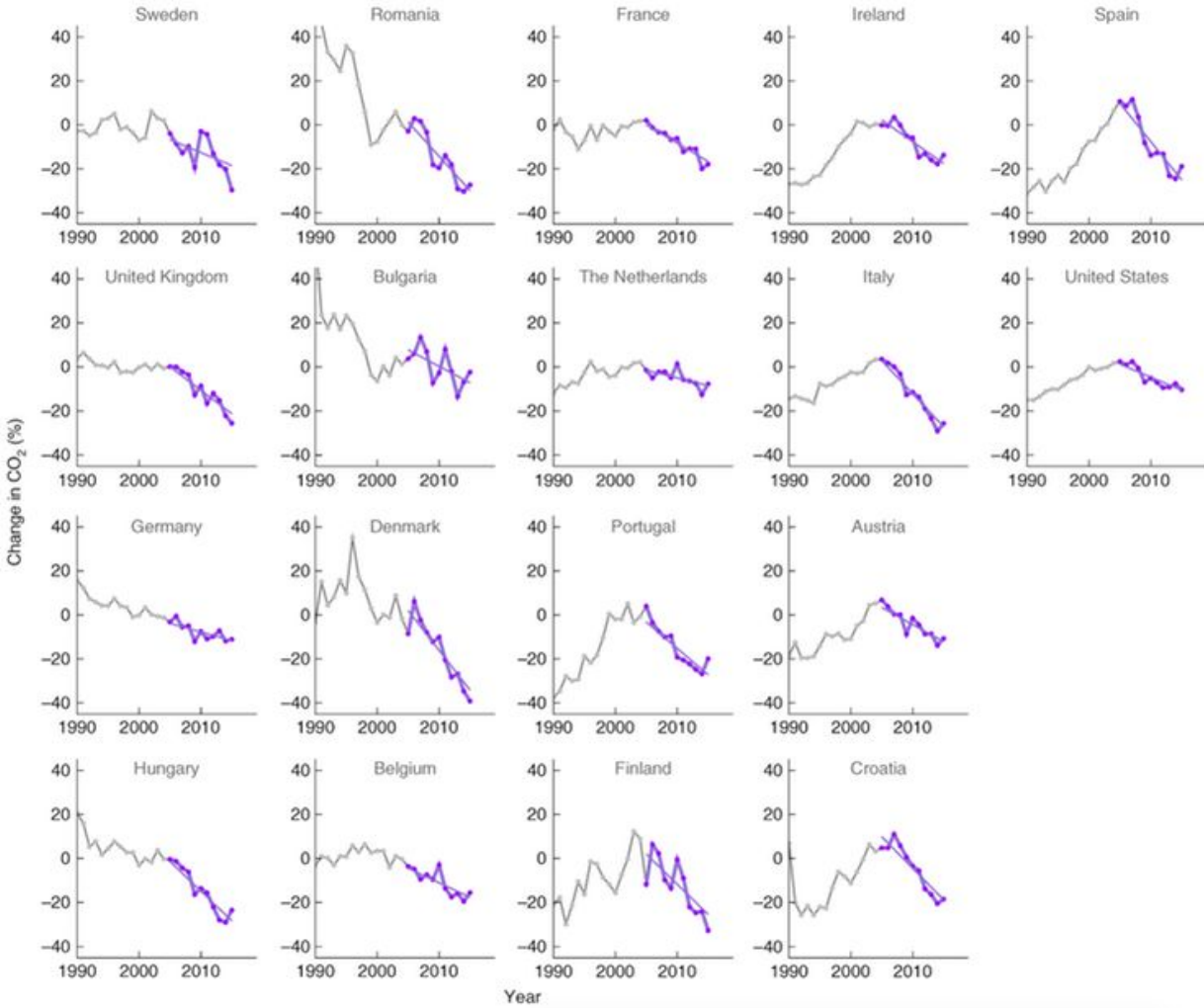
- Establishes a maximum of 2°C
- Strongly agrees to efforts limiting increase to 1.5°C
- Commitments made so far lead to almost 3°C

### Global carbon law guiding decadal pathways



# HOW ARE WE DOING???

<https://www.weforum.org/agenda/2019/03/eighteen-countries-showing-the-way-to-carbon-zero>



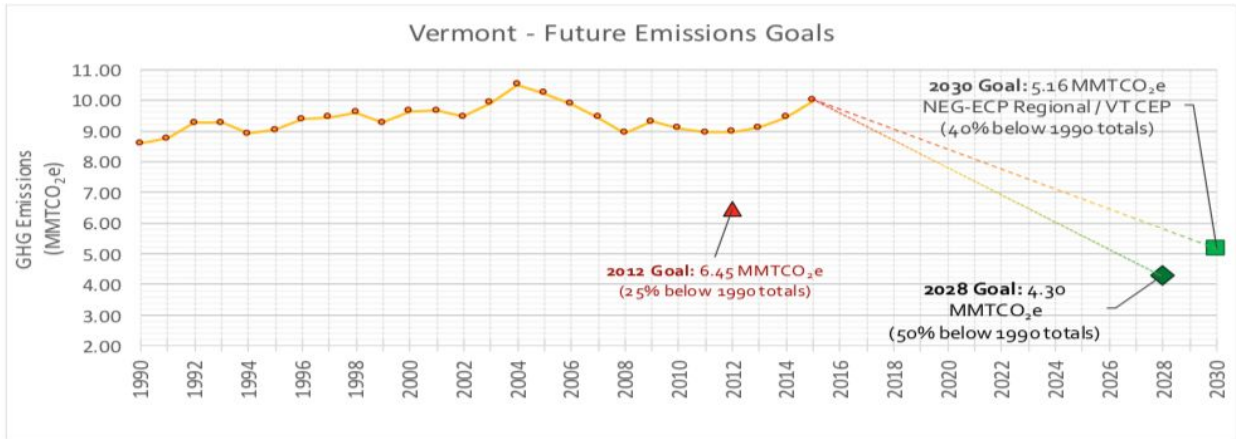


Figure 1. Vermont Historic GHG Emissions Estimates and Future Emissions Reduction Goals

## HOW ARE WE DOING HERE IN VERMONT?

ENERGY ACTION NETWORK

**90%**  
RENEWABLE BY  
**2050**

The Benefits of Achieving Vermont's  
ENERGY & EMISSIONS COMMITMENTS

2018 ANNUAL PROGRESS REPORT

[2018-progress-report](#)

To achieve goals that maintain a healthy planet for our children and grandchildren:

**Reduce GHG by  
5% per year**

## **GLOBAL WARMING SOLUTIONS ACT**

- **WORKS ECONOMY-WIDE**
- **ESTABLISHES ACCOUNTABILITY FOR GREENHOUSE GAS REDUCTIONS**
- **FLEXIBLE PATHWAYS**
- **ADAPTIVE MANAGEMENT**
- **FAILURE IS NOT AN OPTION!!**

## **VERMONT GREENHOUSE GAS INVENTORY**

- **Becomes a critical leverage point in accountability**
- **What are its strengths and limits?**
- **Transparency will be crucial**
- **GWSA calls for full accounting**