

Policy Analysis for the Energy/Water Nexus in ERCOT

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Scenarios tested

1. Baseline from ERCOT, extended to 2040
2. Water consumption limited to calculated 2010 amount
3. High efficiency, 0.67% annual drop in demand
4. High wind cost, i.e. no drop from 2010 cost
5. Carbon cap, 40% decline by 2040

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DISCLAIMER: The results shown here are subject to change.

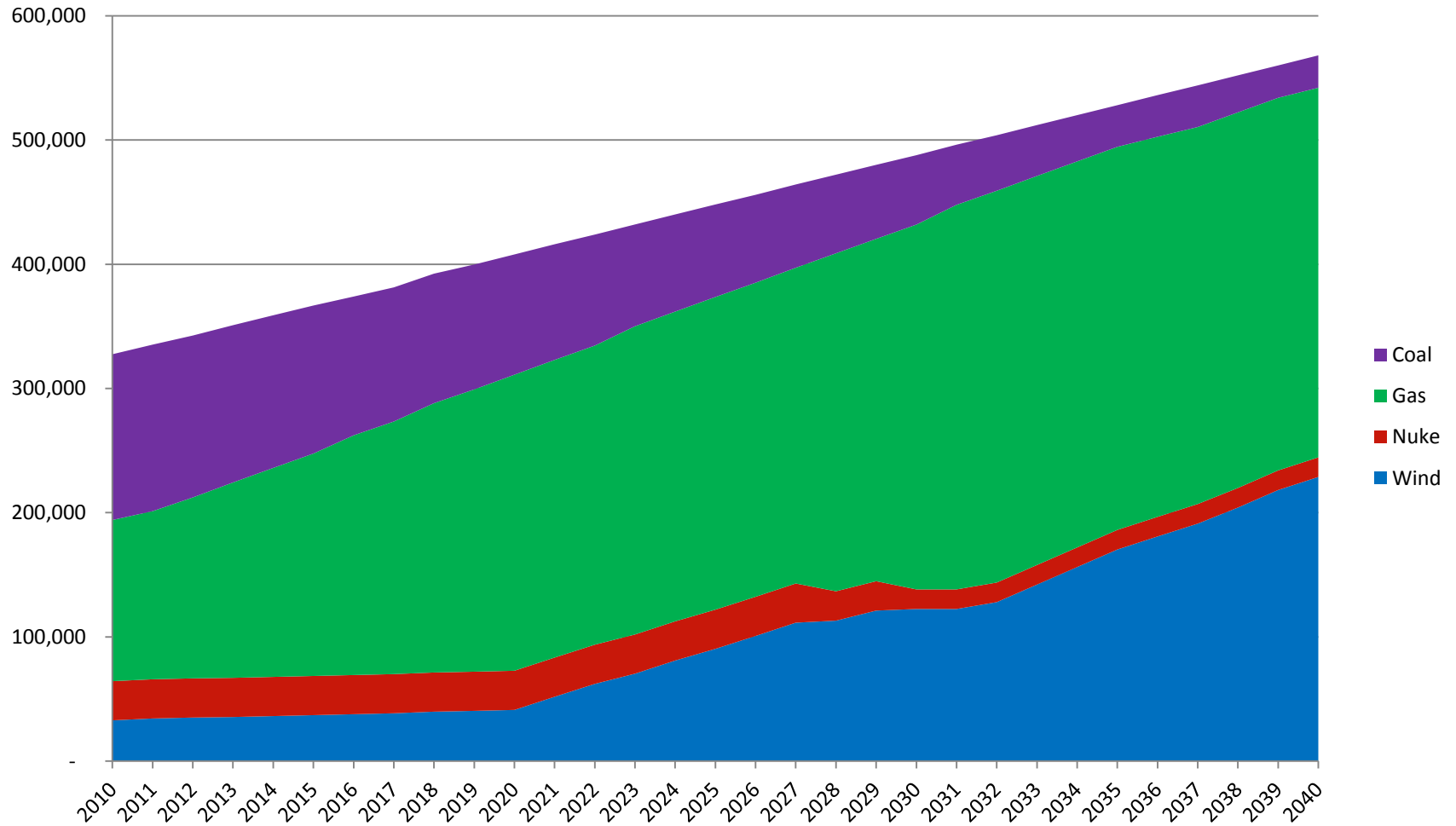
But First --

Remember:

Up, Down, Big, Little

Baseline fuel mix

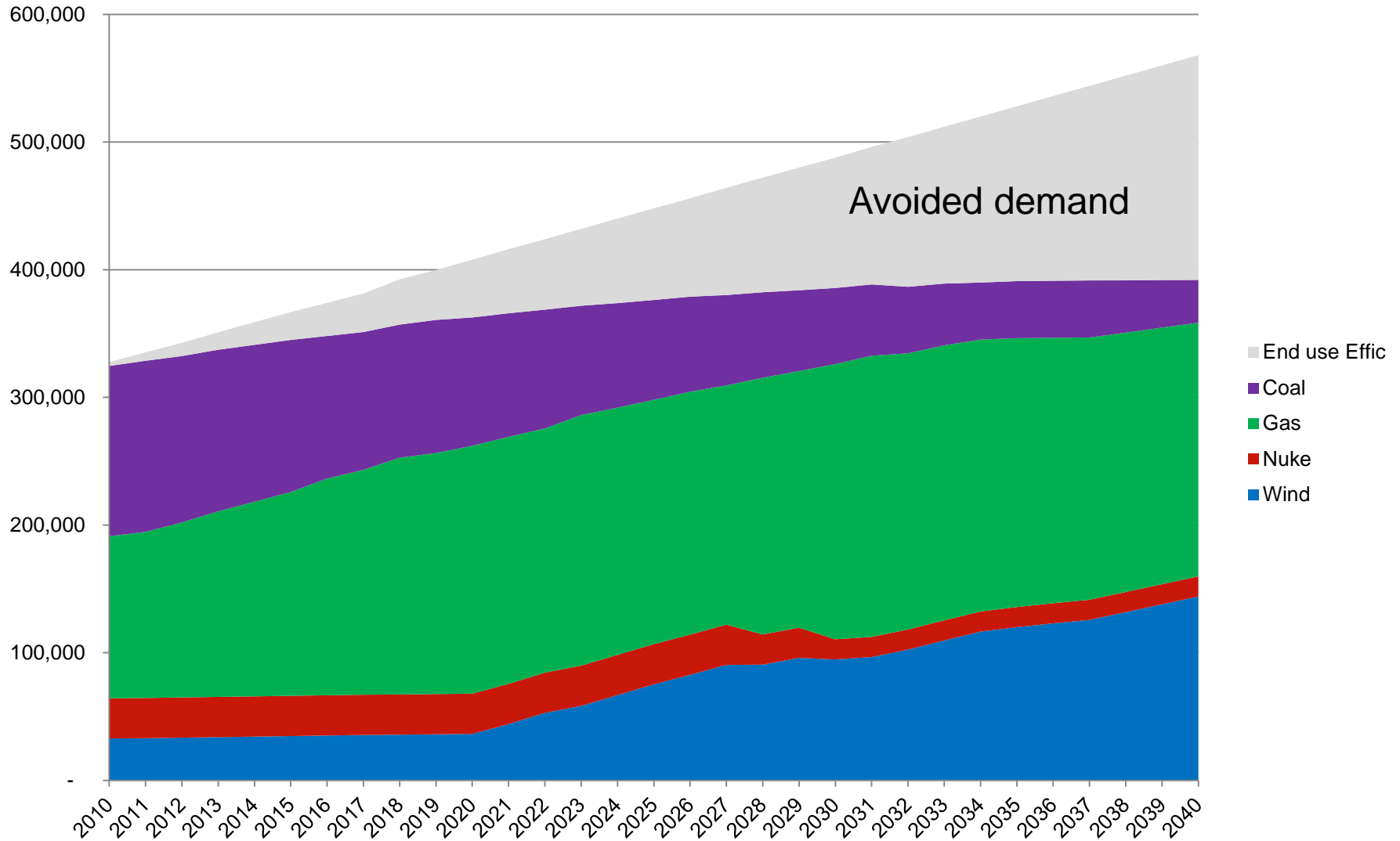
(GWh)



*Preliminary results, subject to change

High efficiency

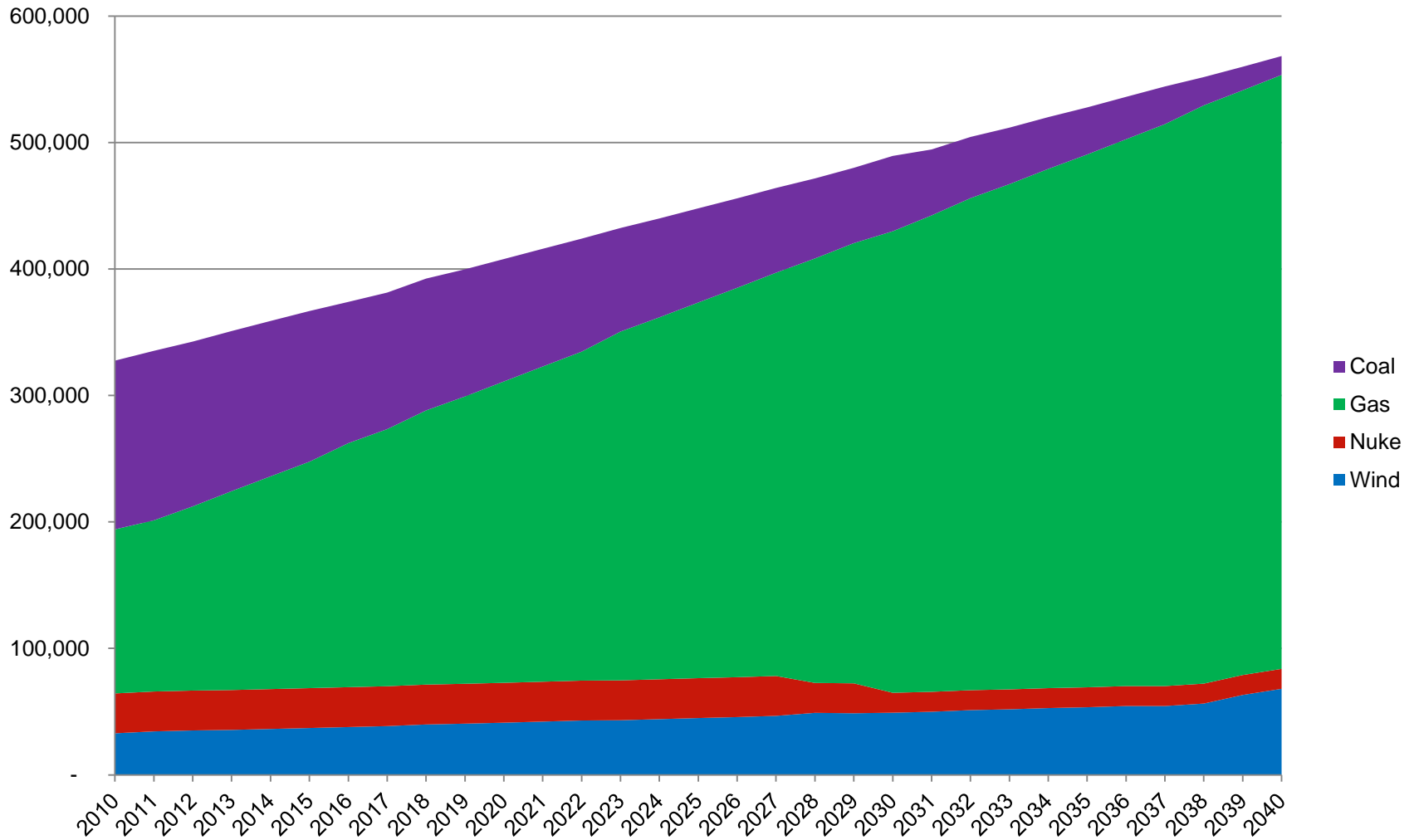
(GWh)



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High wind cost

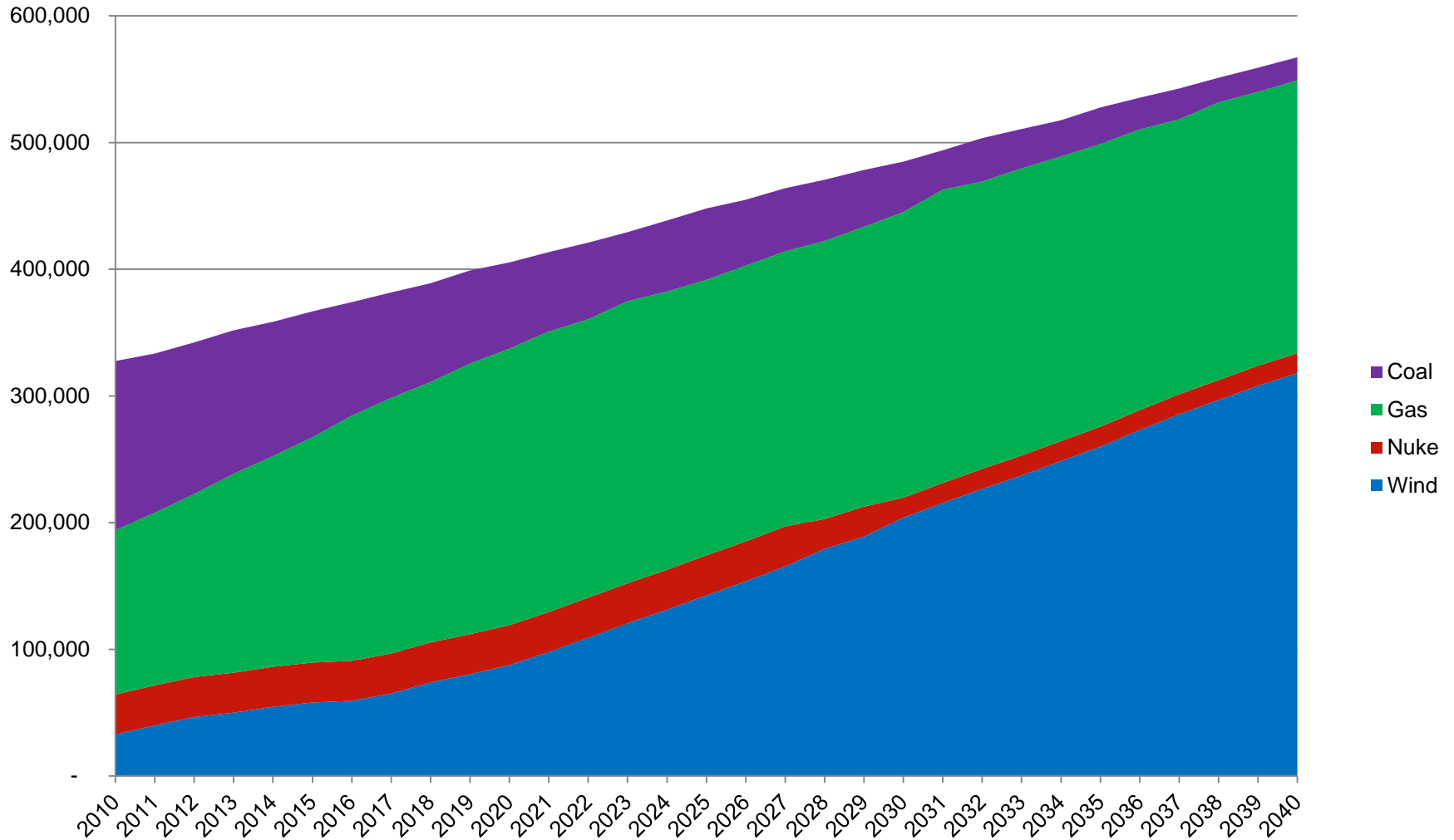
(GWh)



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CO₂ cap

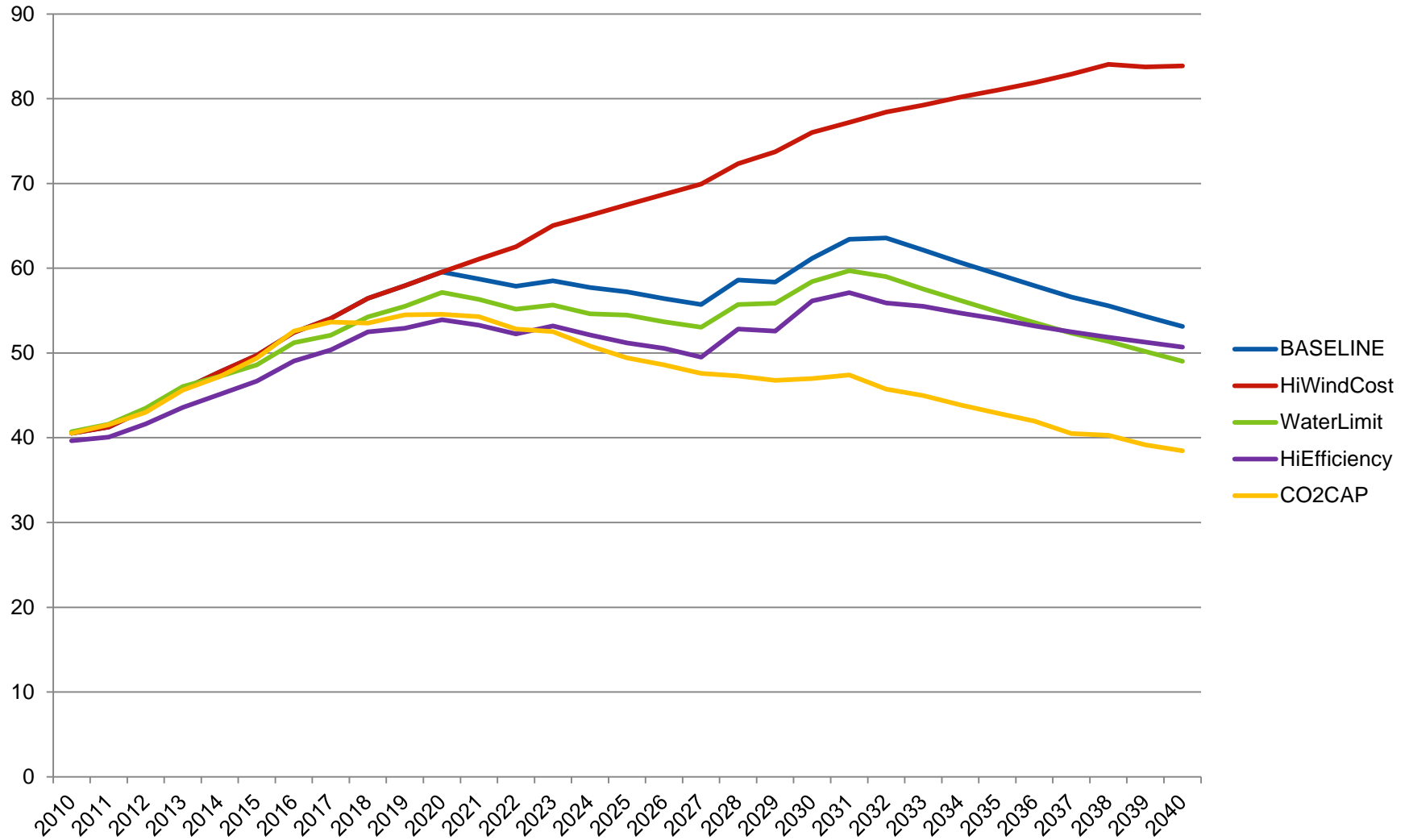
(GWh)



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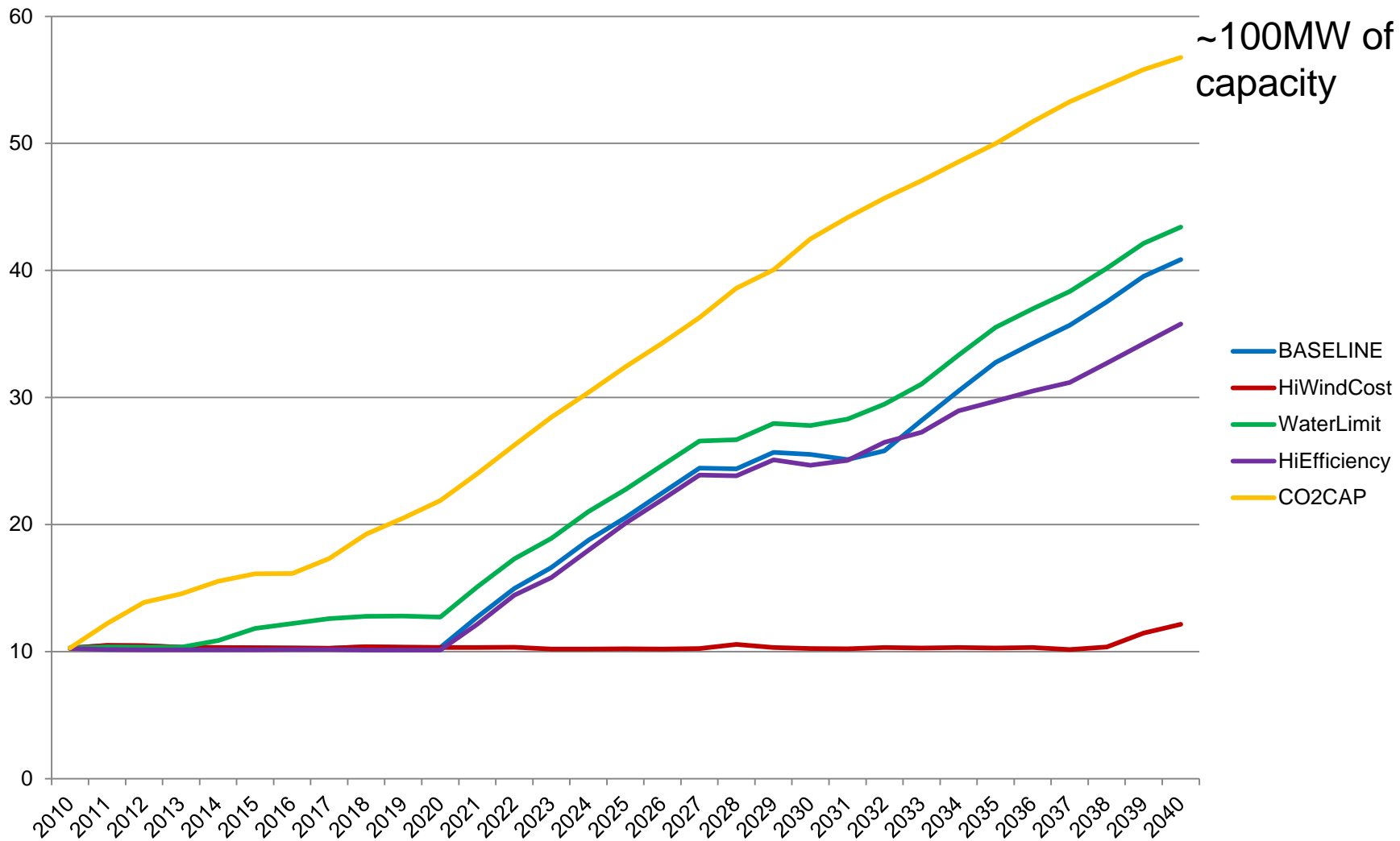
Gas Generation %

(73% demand growth)



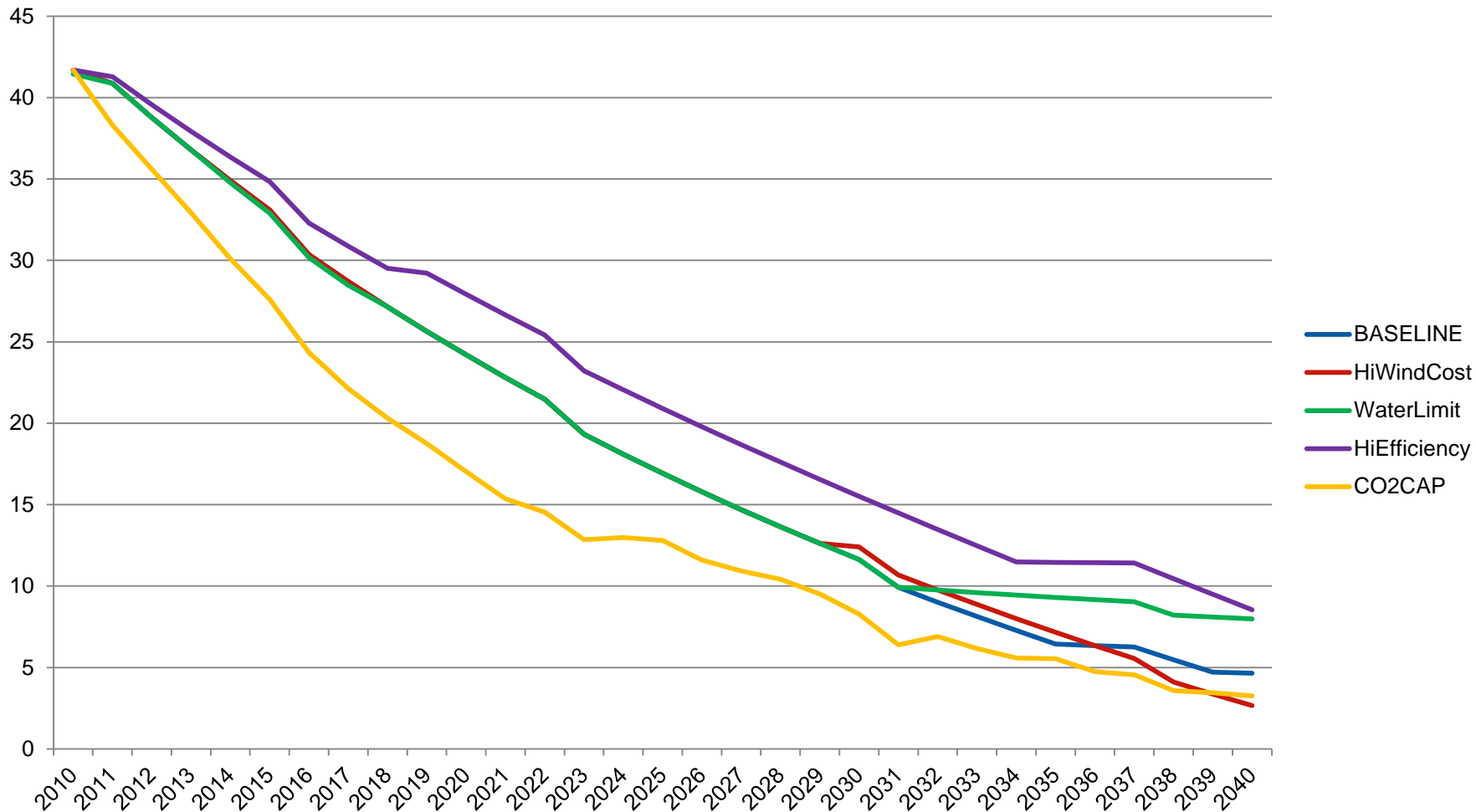
*Preliminary results, subject to change

Wind Generation %



*Preliminary results, subject to change

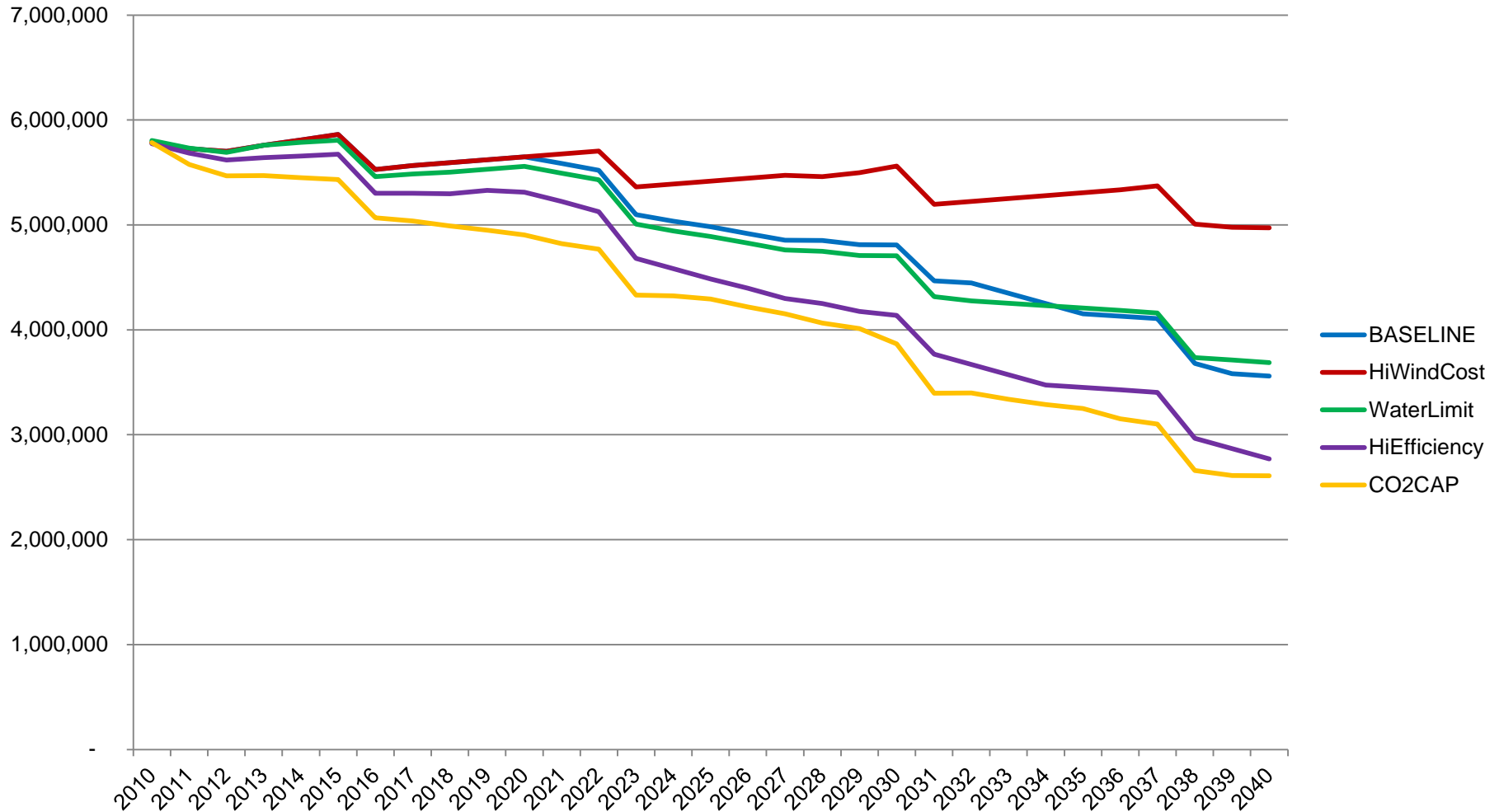
Coal Generation %



*Preliminary results, subject to change

Water withdrawals

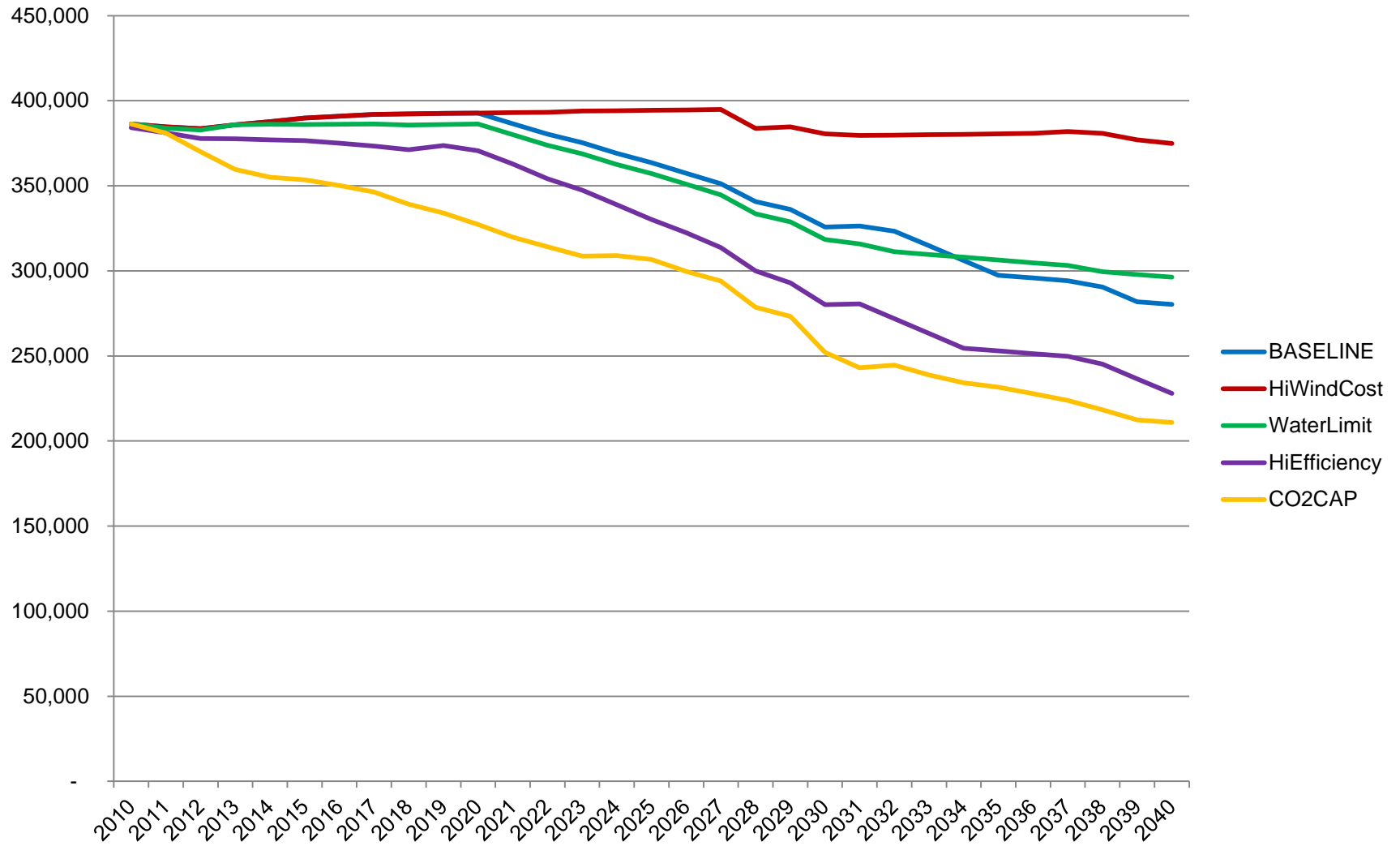
(ac-ft/yr)



*Preliminary results, subject to change

Water consumption

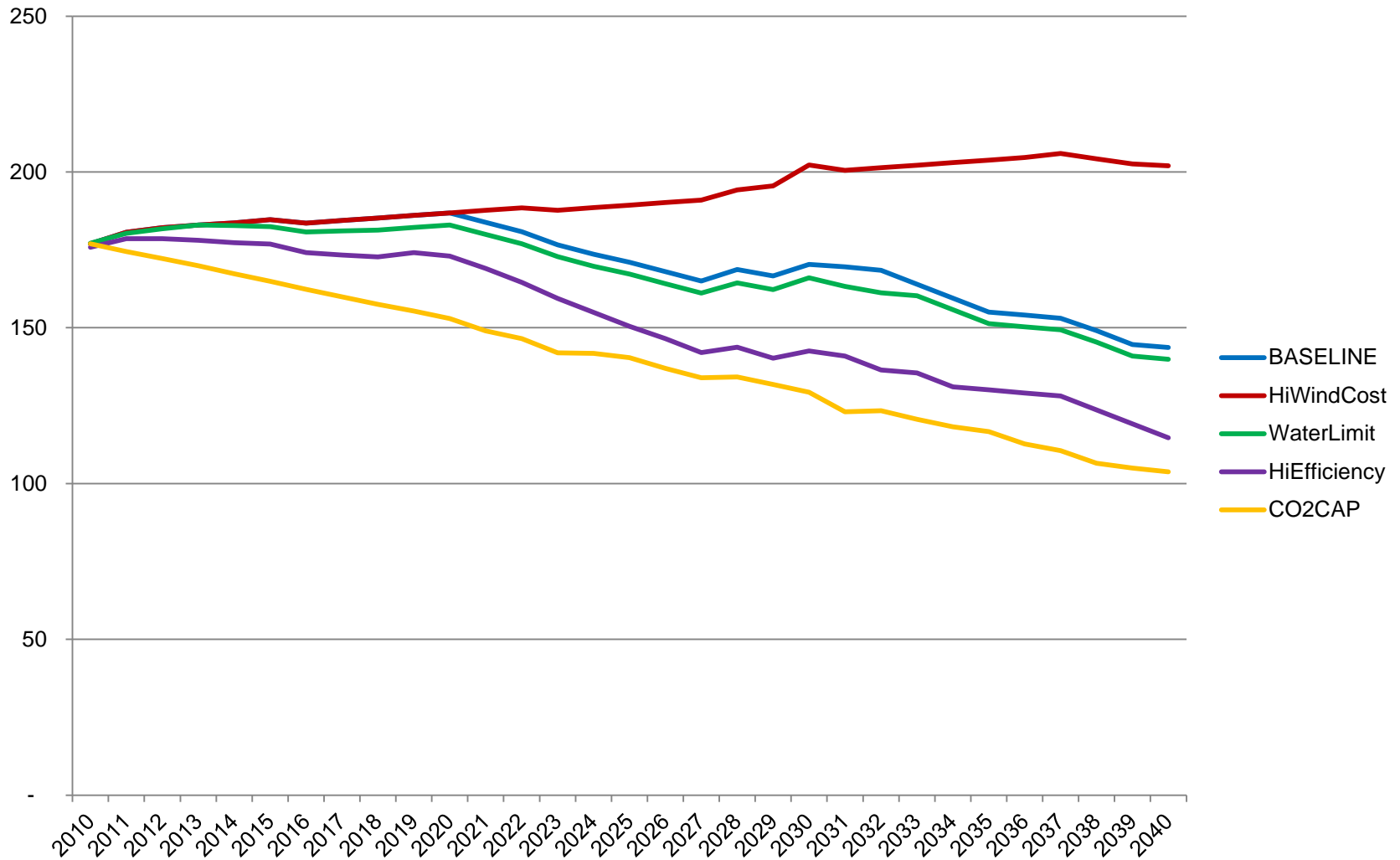
(ac-ft/yr)



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CO₂ emissions

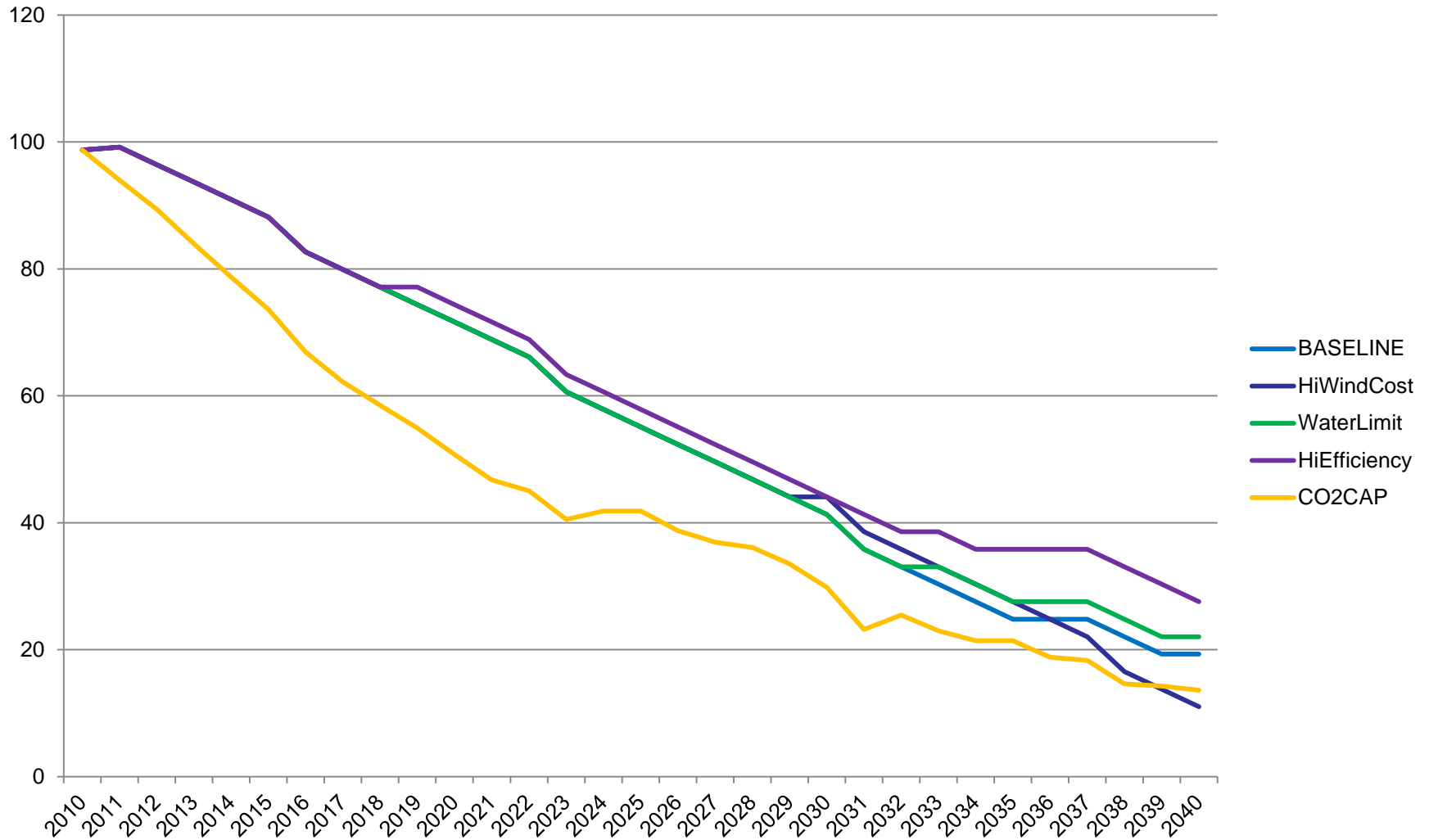
(million tons)



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SO₂ emissions

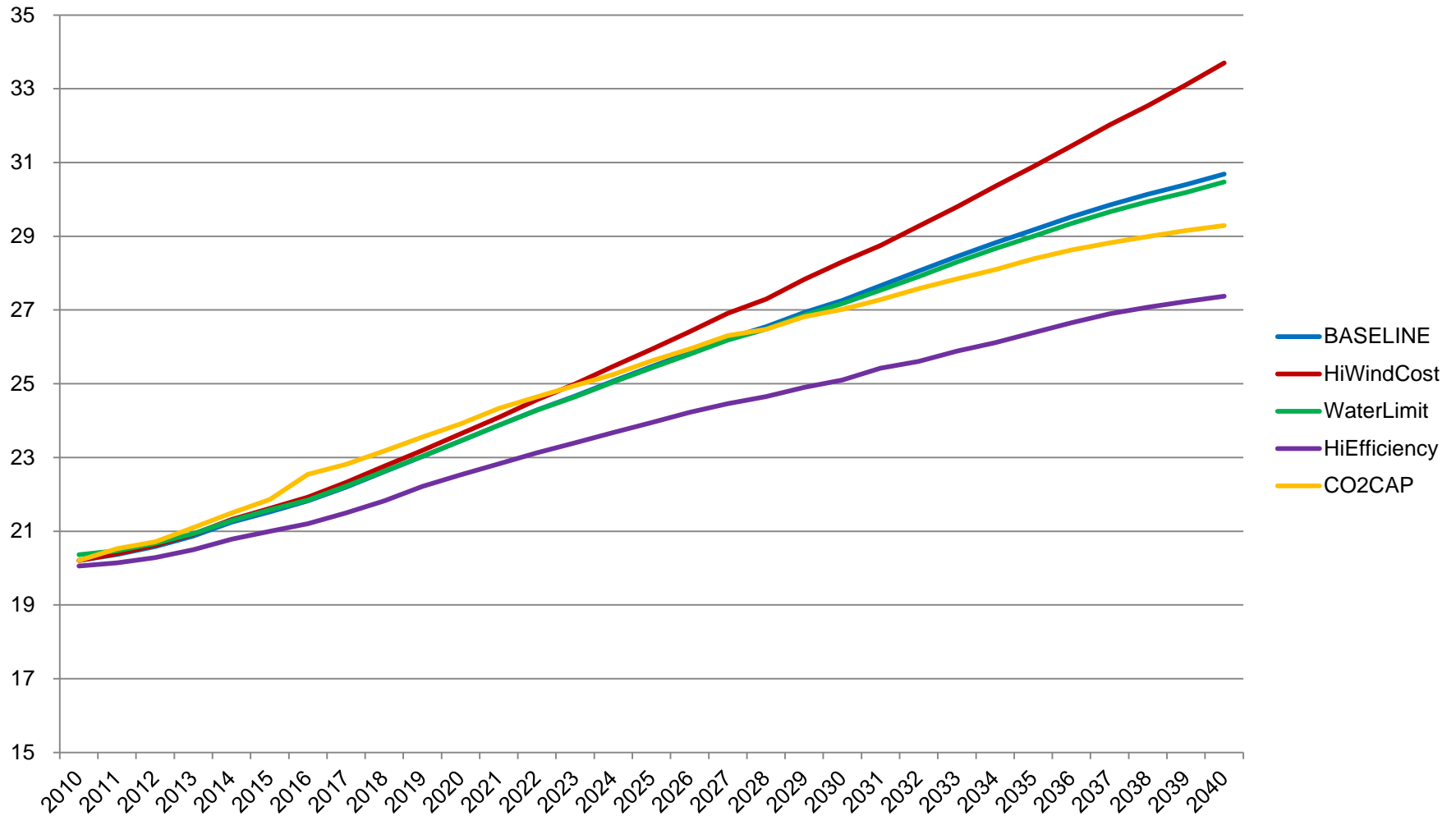
(million lbs)



*Preliminary results, subject to change

Total system costs

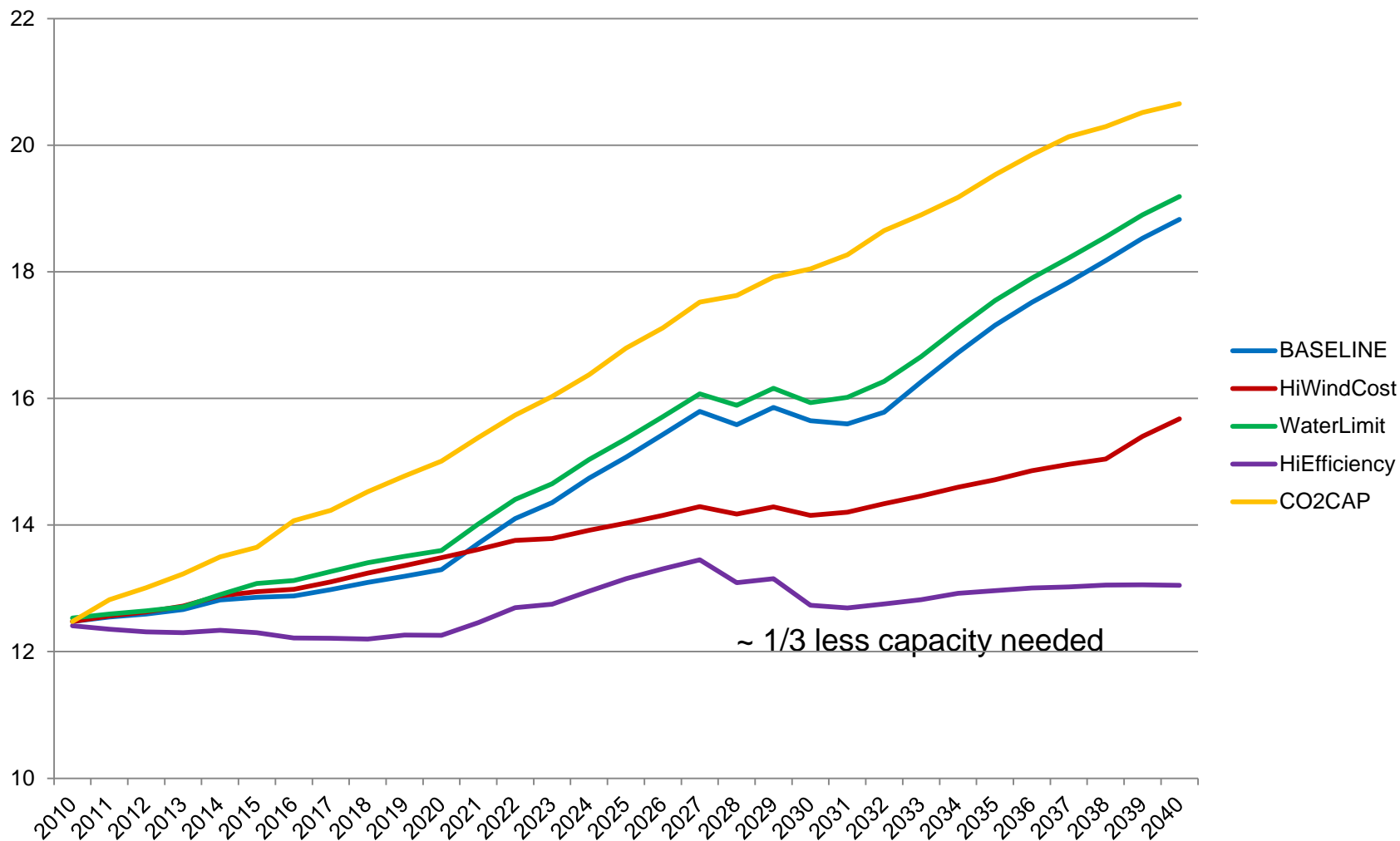
(\$billion)



*Preliminary results, subject to change

Fixed costs

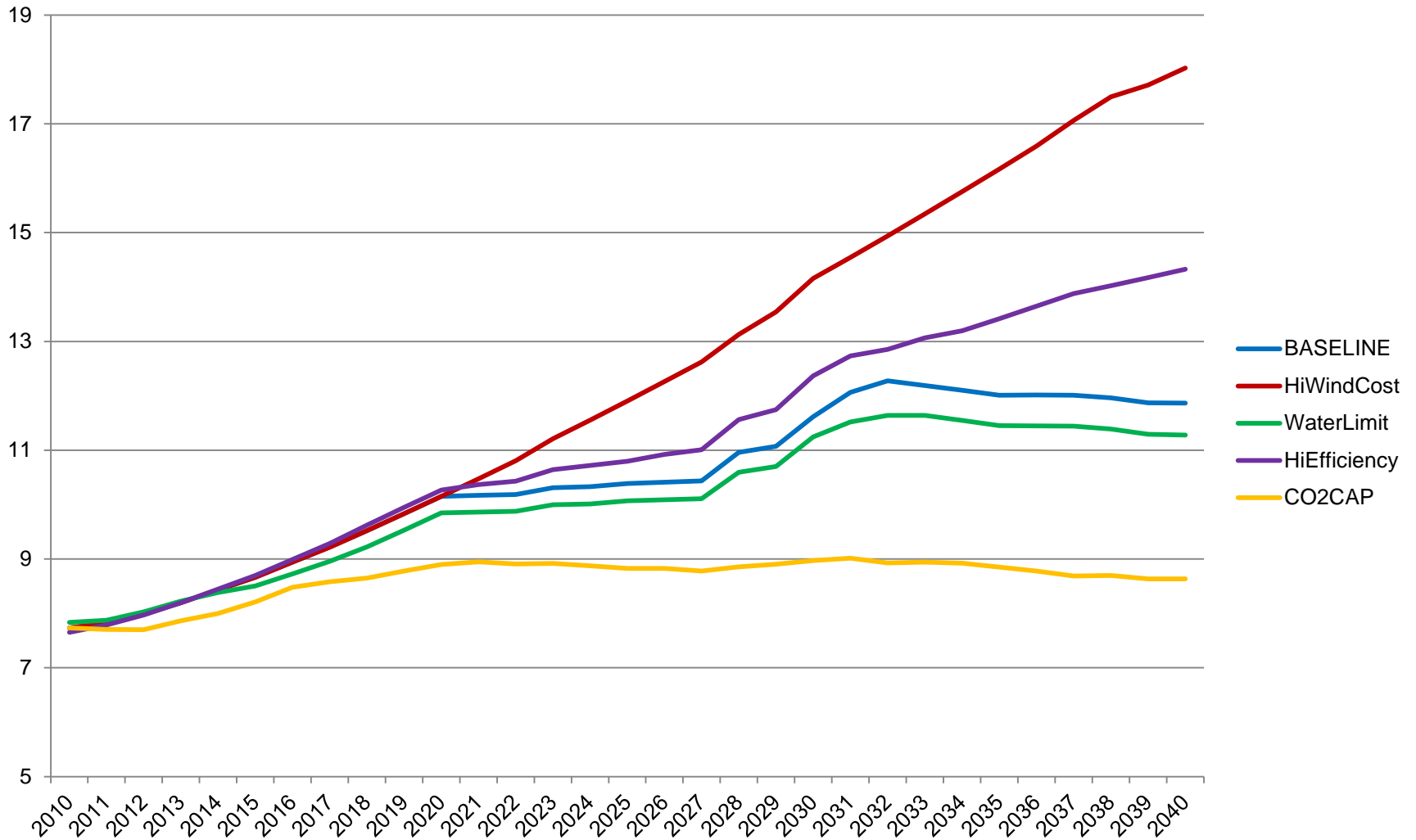
(\$billion)



*Preliminary results, subject to change

Variable costs

(\$billion)



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