

Brown University Community Council (BUCC)
Monday, April 30, 2018
12:00 – 1:30 pm
Alumnae Hall Auditorium, 194 Meeting St.

Agenda

1. [Sustainability Study Committee](#) Community Forum
2. Approval of Minutes of March 20, 2018 BUCC Meeting
3. Updates from the President
President Paxson
4. Open Time for University Community Members to Present Broad Campus Issues to the Council

Moving Brown Towards (Climate) Sustainability

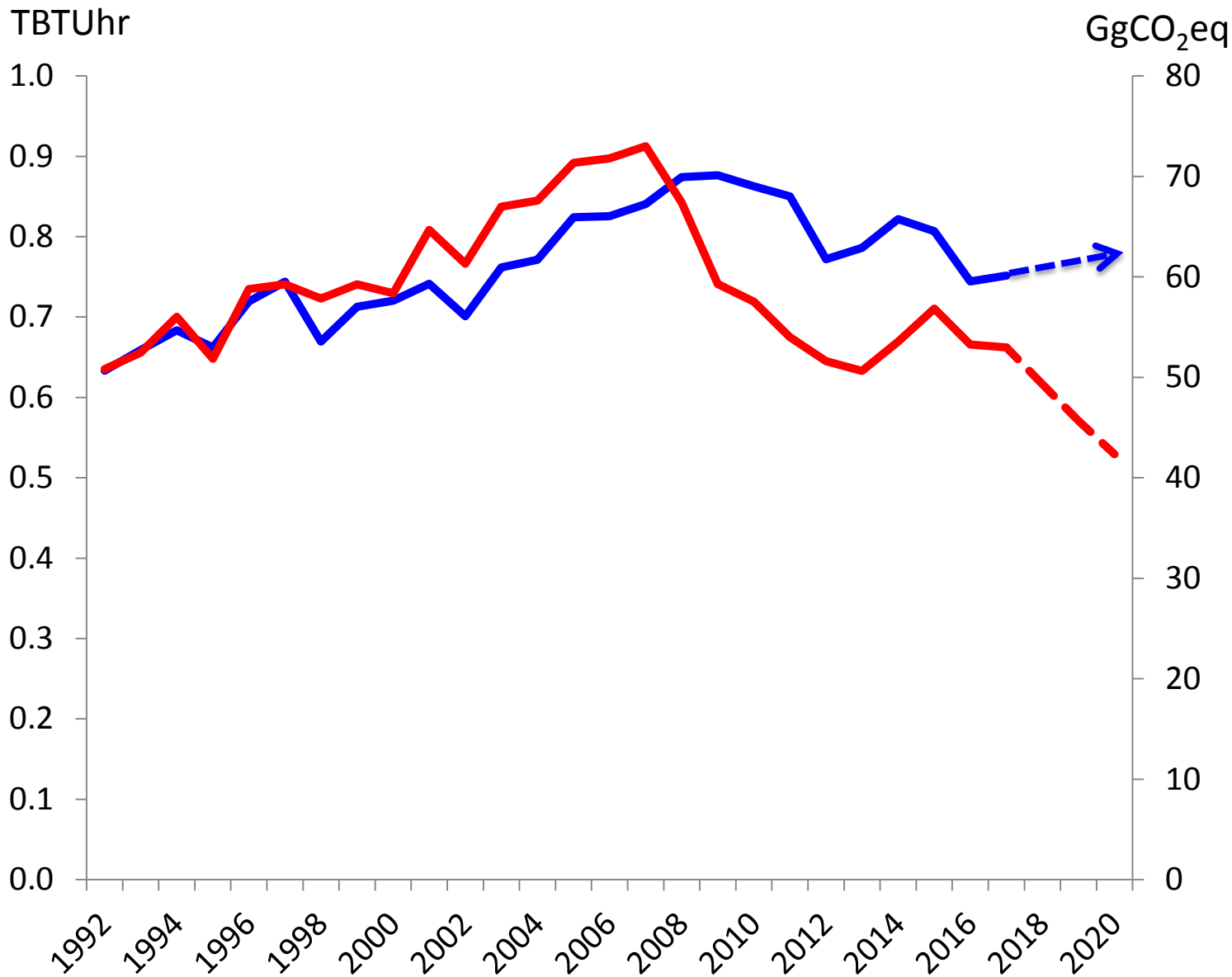
Climate Goals (circa 2008)

Reduce emissions 42% below 2007 levels by 2020.

Energy use in new facilities will be 25-50% lower than required by code.

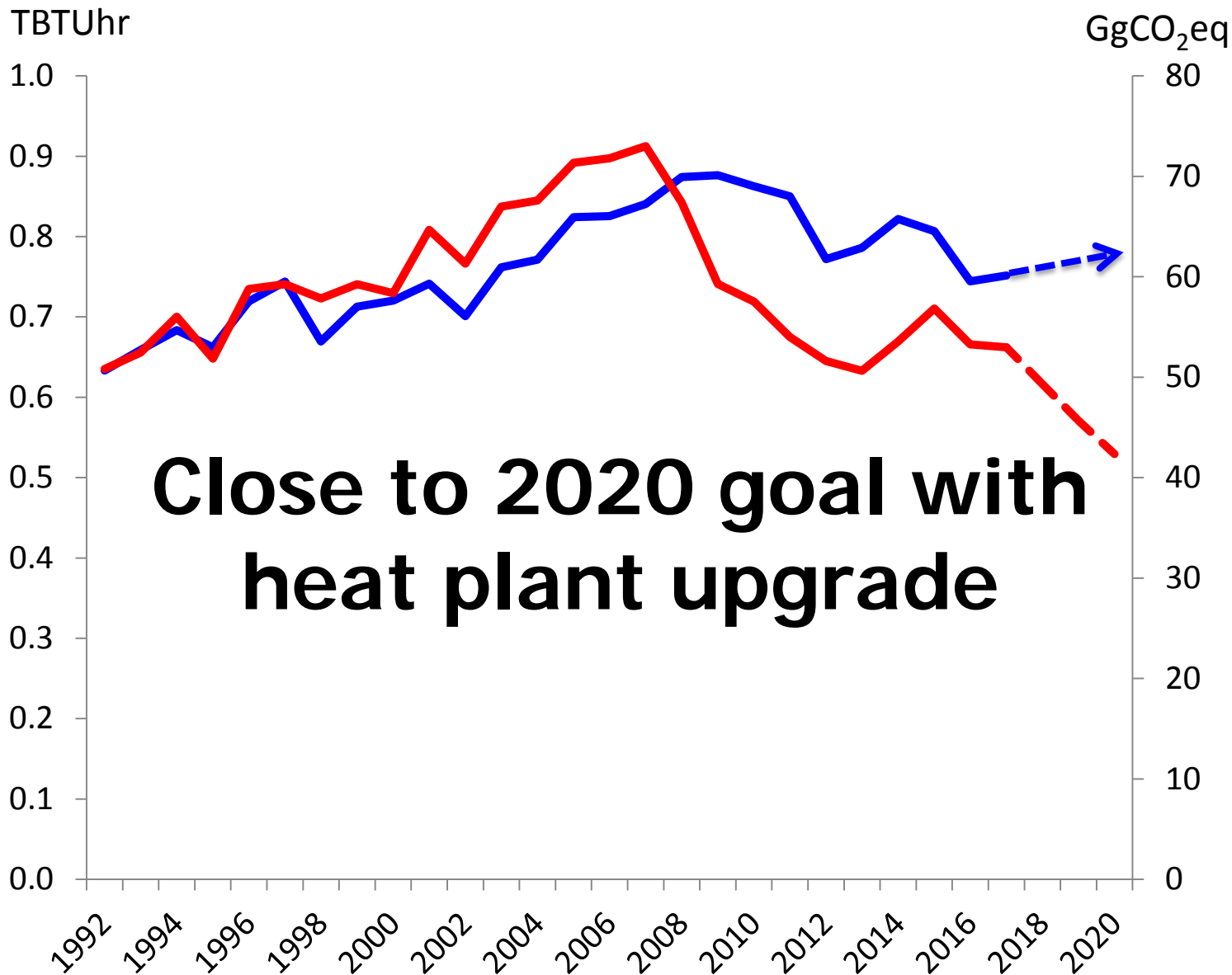
At least LEED silver standard.

Brown's Energy Use and Emissions*



* of the ones we track

Brown's Energy Use and Emissions*



**Close to 2020 goal with
heat plant upgrade**

* of the ones we track

Some global context

**Global emissions
must peak now and
reach zero by 2050**



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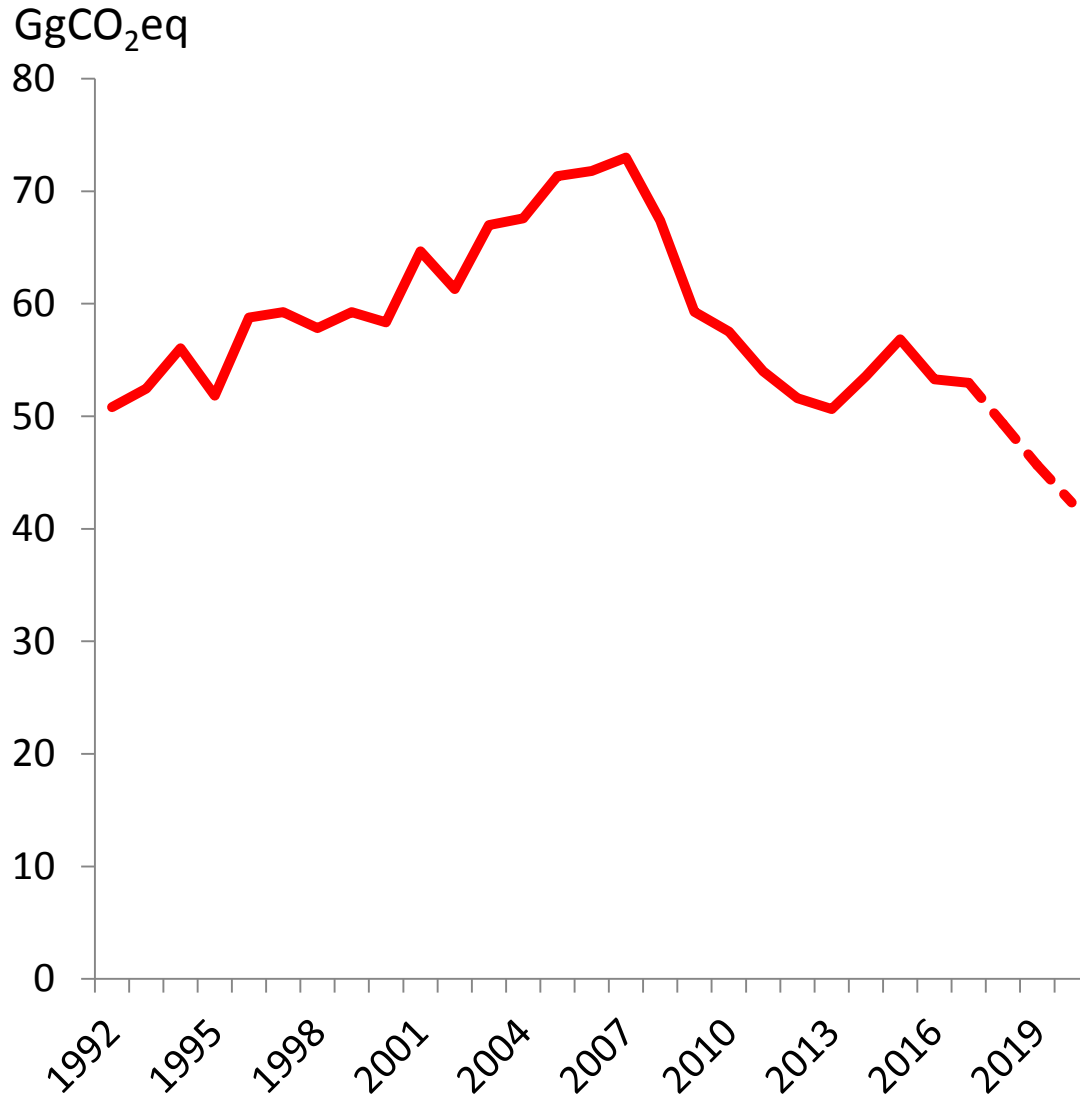
OCTOBER 26, 2013

BUILDING ON DISTINCTION

A NEW PLAN FOR BROWN

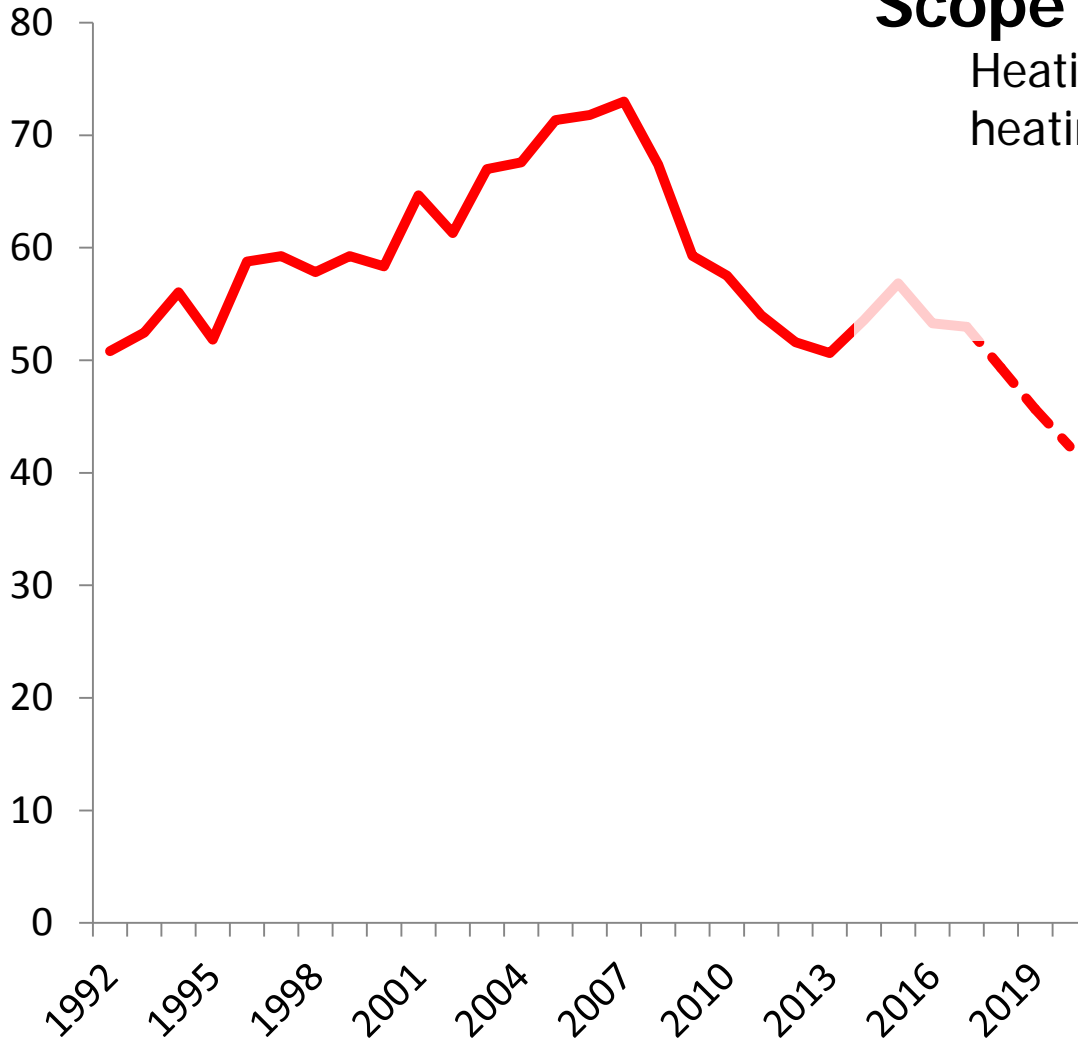
**“engage in responsible
historical, fiscal, and
environmental stewardship
and sustainability”**

Brown's 2017 Emissions



Brown's 2017 Emissions

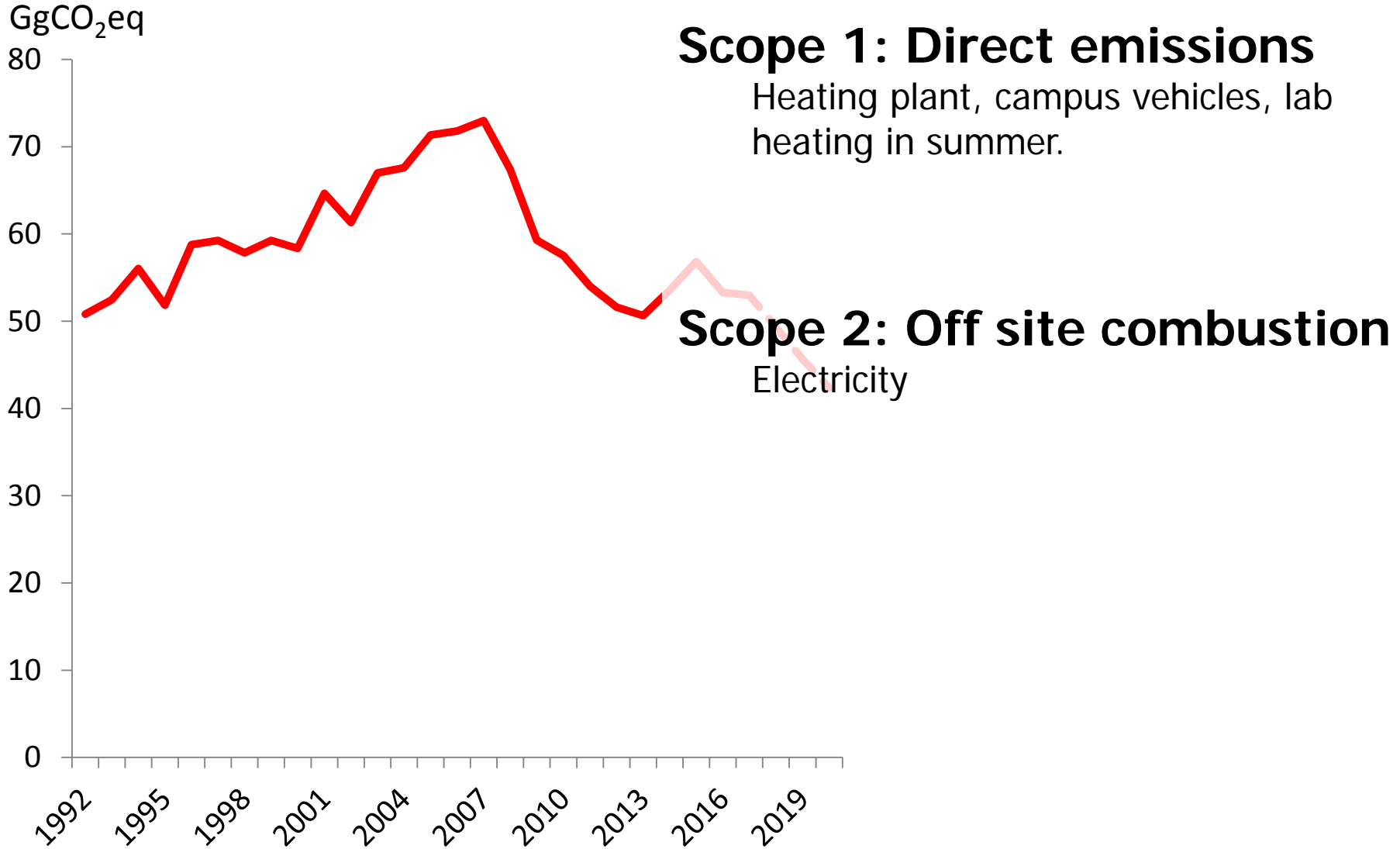
GgCO₂eq



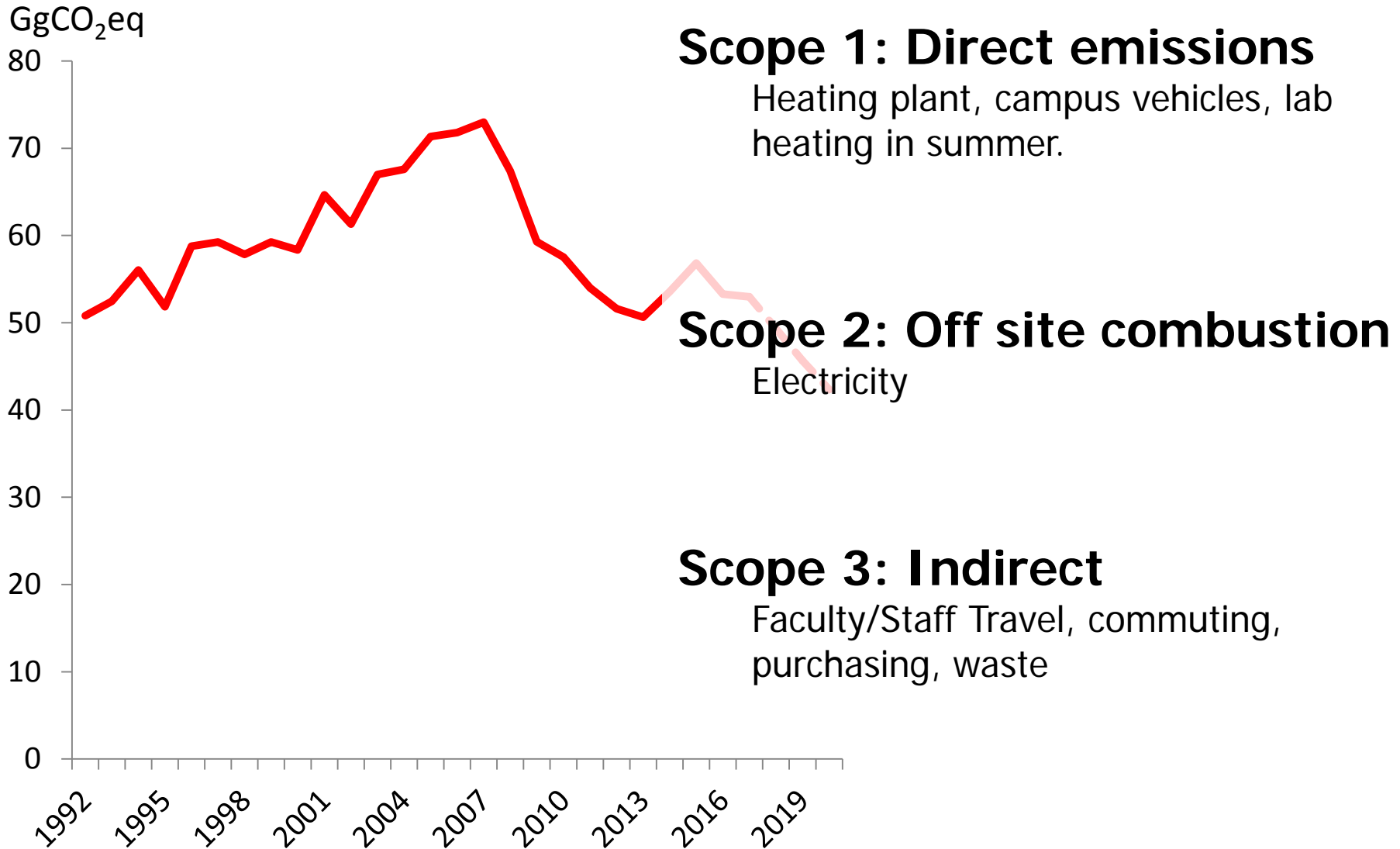
Scope 1: Direct emissions

Heating plant, campus vehicles, lab heating in summer.

Brown's 2017 Emissions

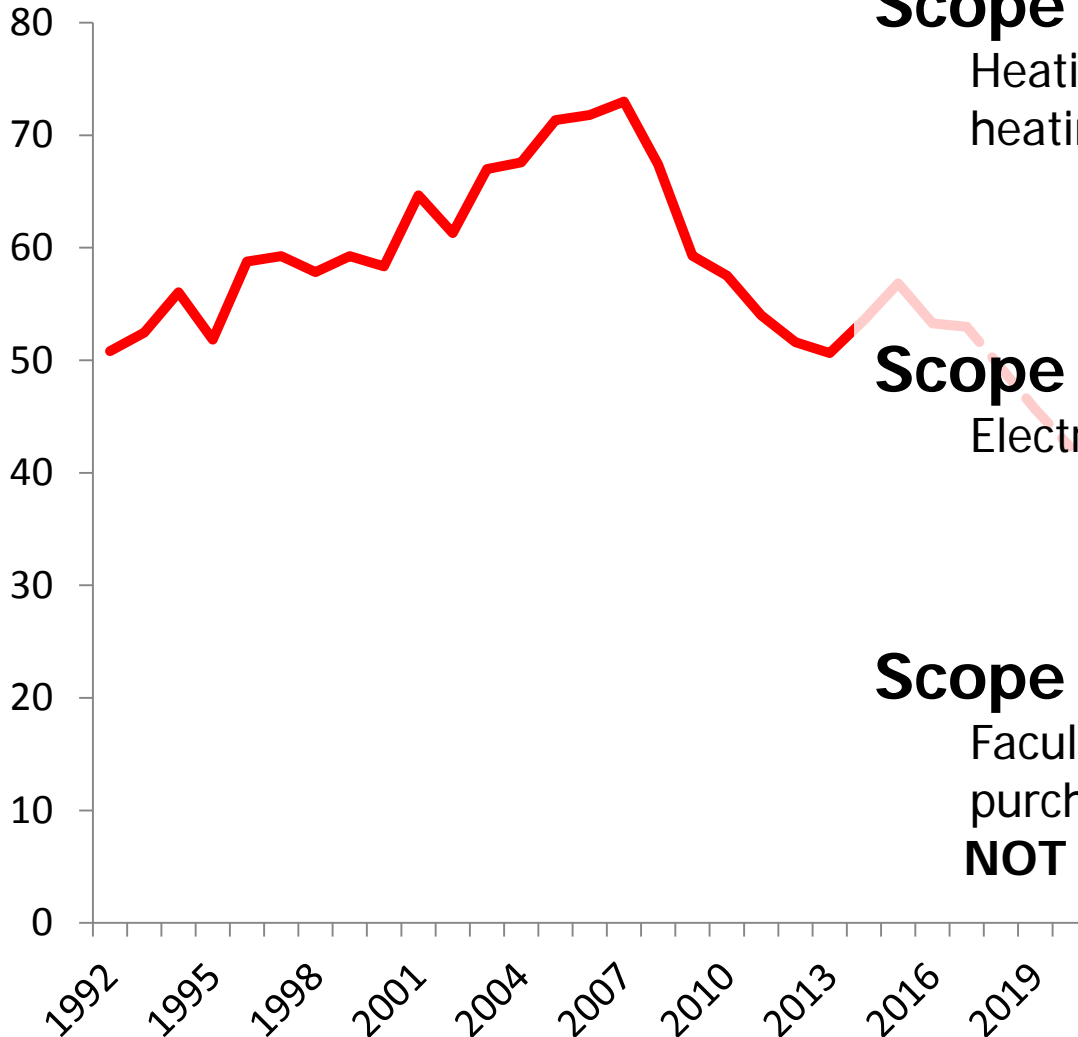


Brown's 2017 Emissions



Brown's 2017 Emissions

GgCO₂eq



Scope 1: Direct emissions

Heating plant, campus vehicles, lab heating in summer.

Scope 2: Off site combustion

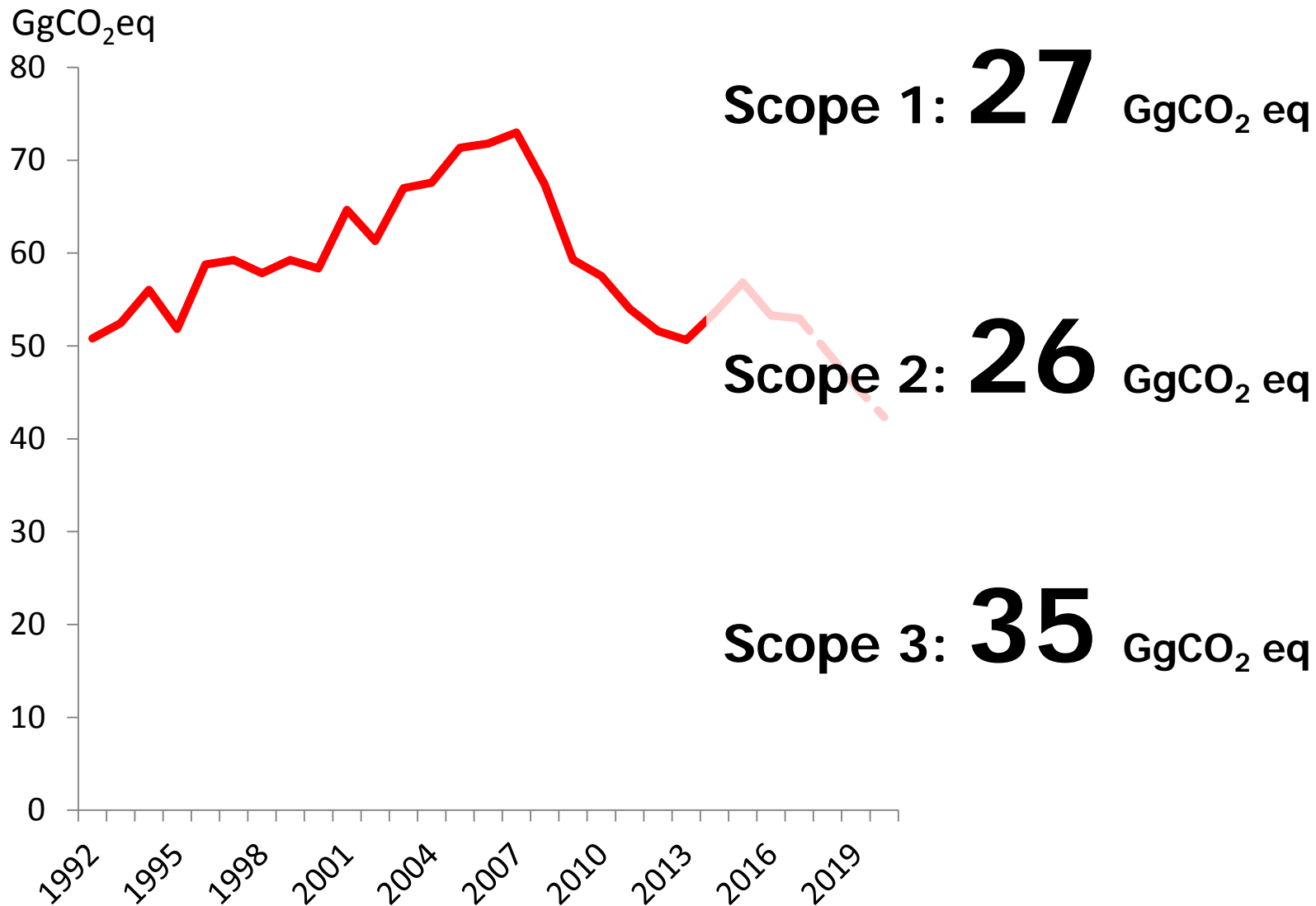
Electricity

Scope 3: Indirect

Faculty/Staff Travel, commuting, purchasing, waste.

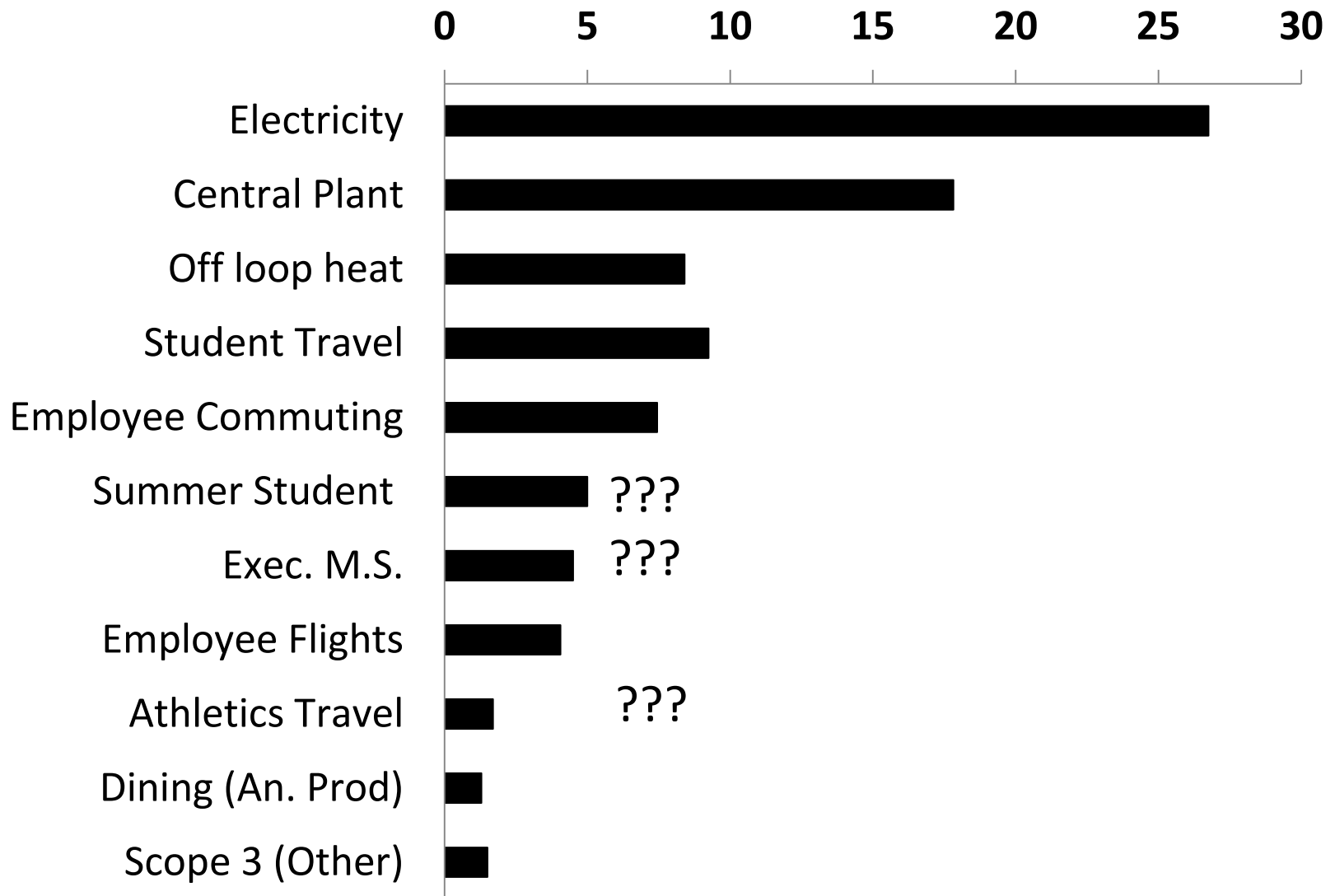
NOT PREVIOUSLY INCLUDED

Brown's 2017 Emissions



Brown's 2017 Emissions

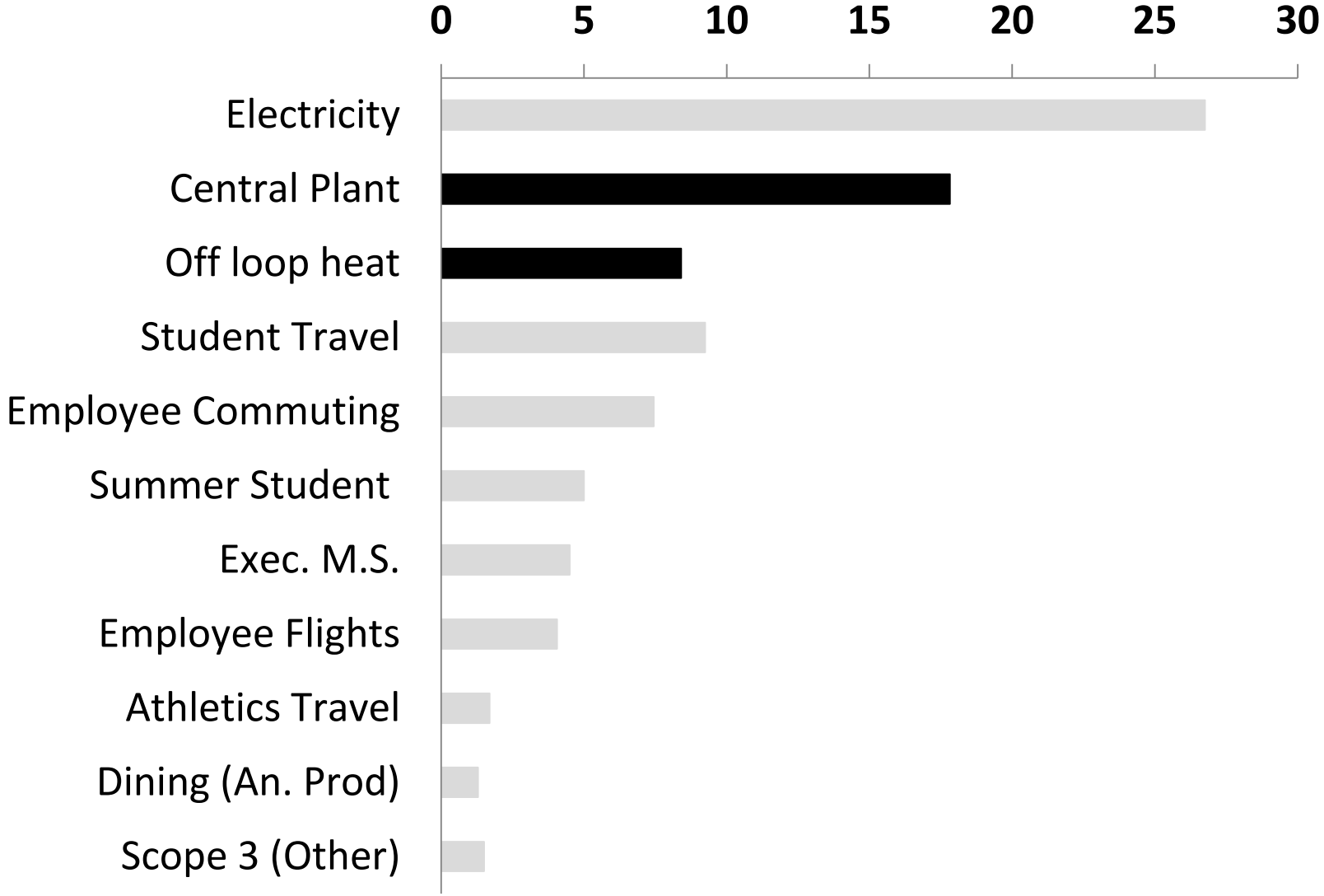
(Gg CO₂ eq)



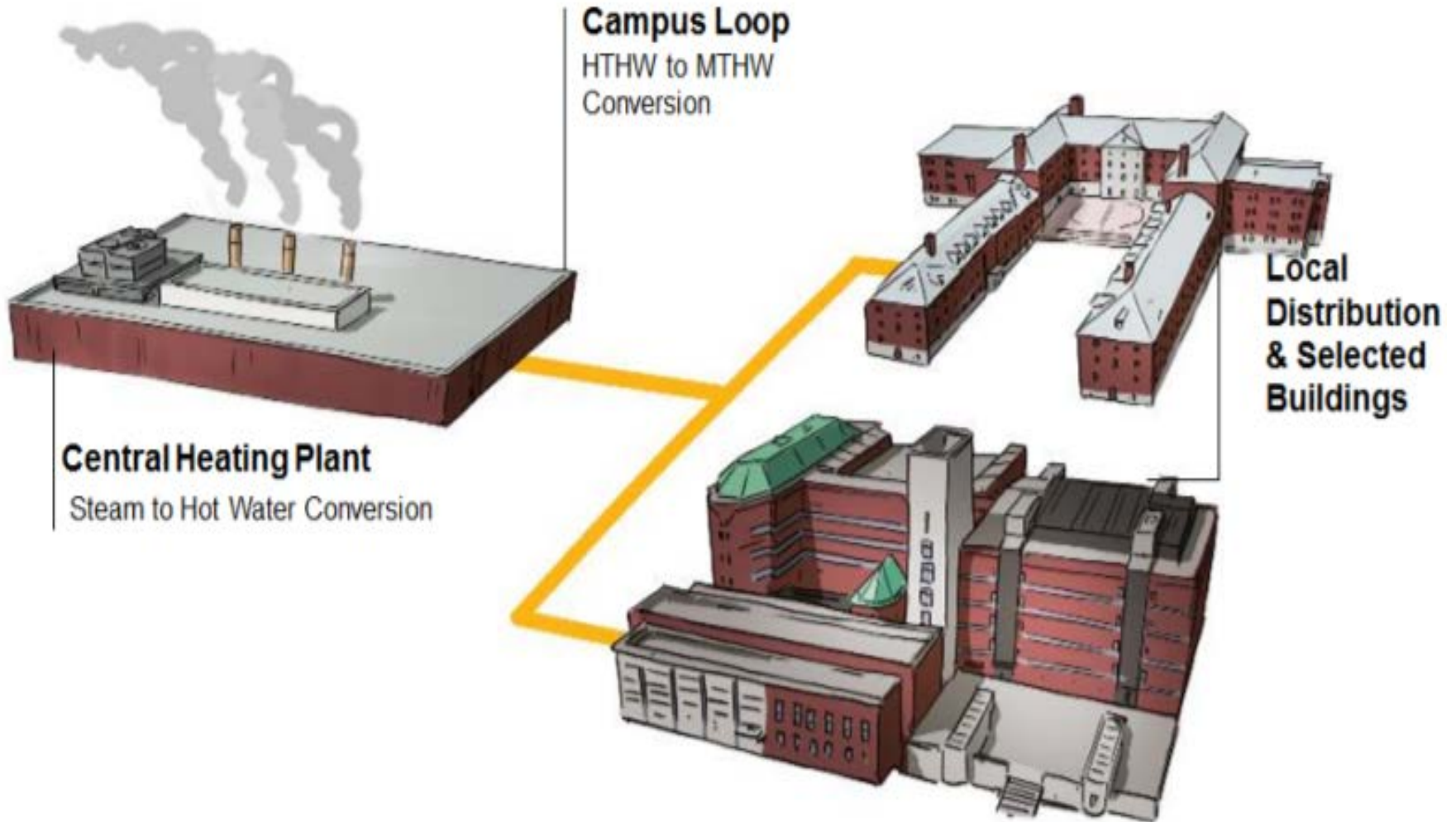
Scope 1: Campus Combustion

Scope 1 Emissions

(Gg CO₂ eq)

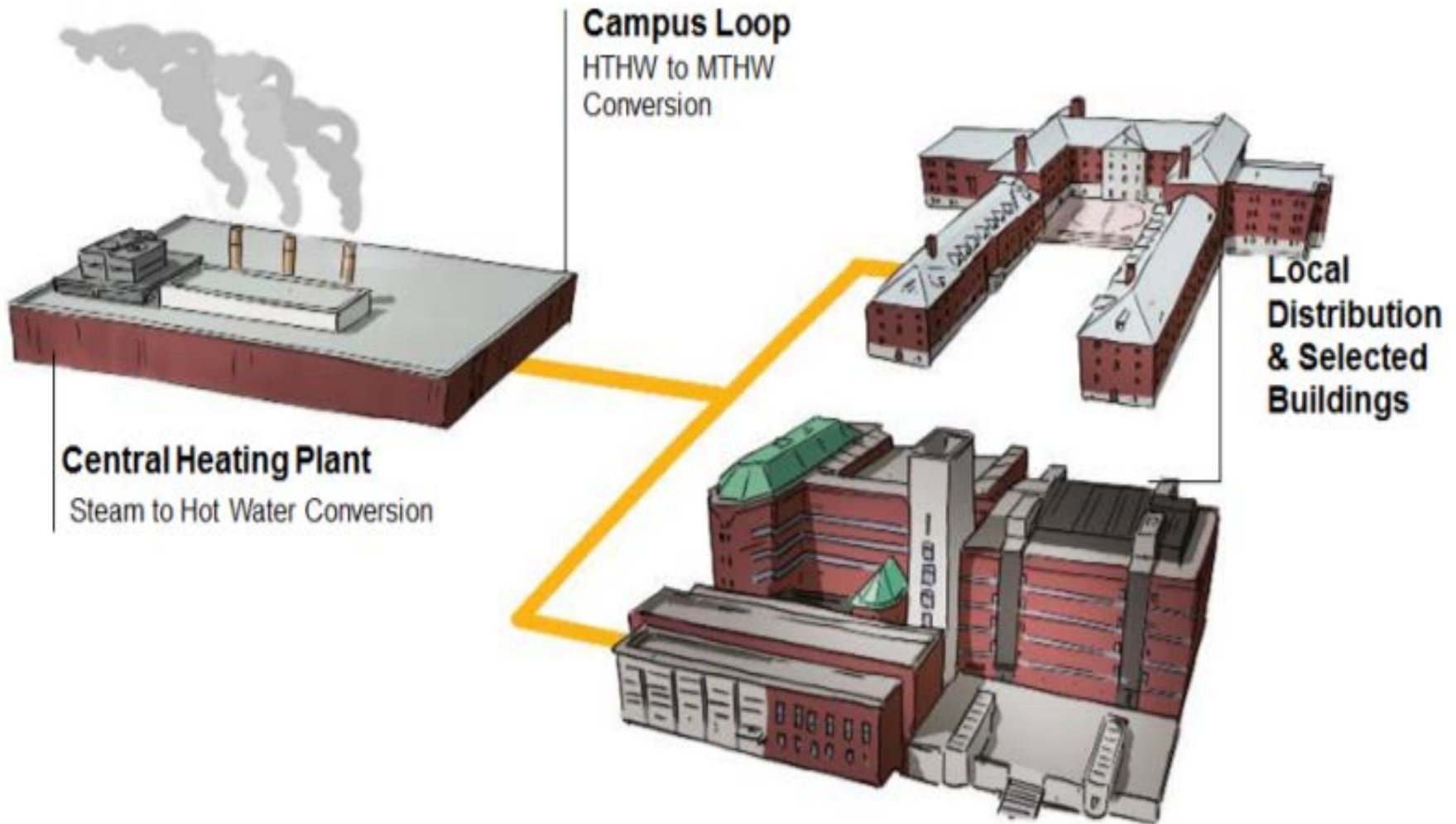


Now: Gas for steam



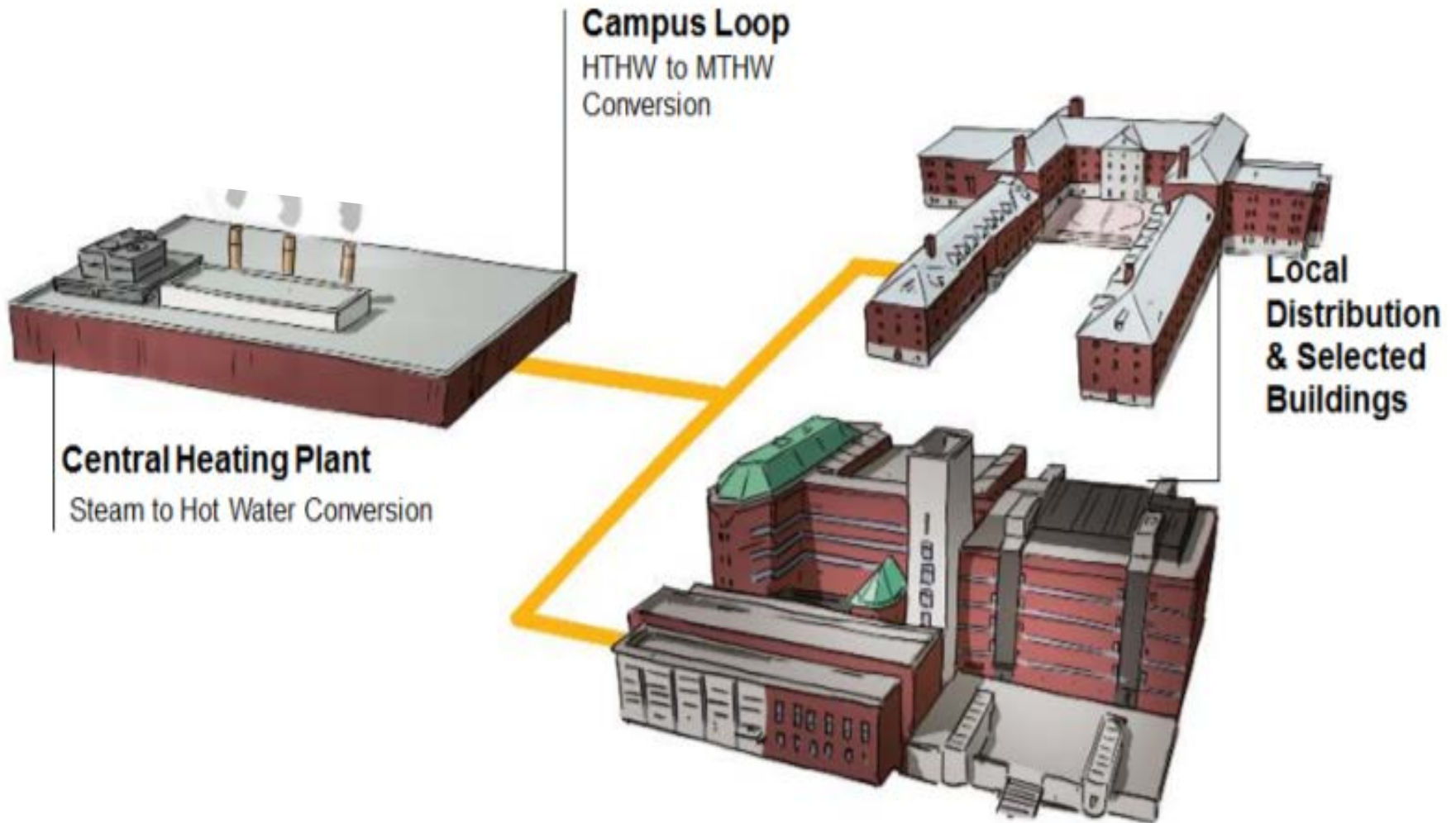
2020: Gas for hot water

Estimate savings \$1mil/yr



202?: Electric to hot water

Would take CHP emissions to zero if combined with renewables and storage.



Off-loop buildings

Almost 200 buildings

Convert to heat pumps

Better insulation

Will need heat recovery from labs

Scope 1: Solution

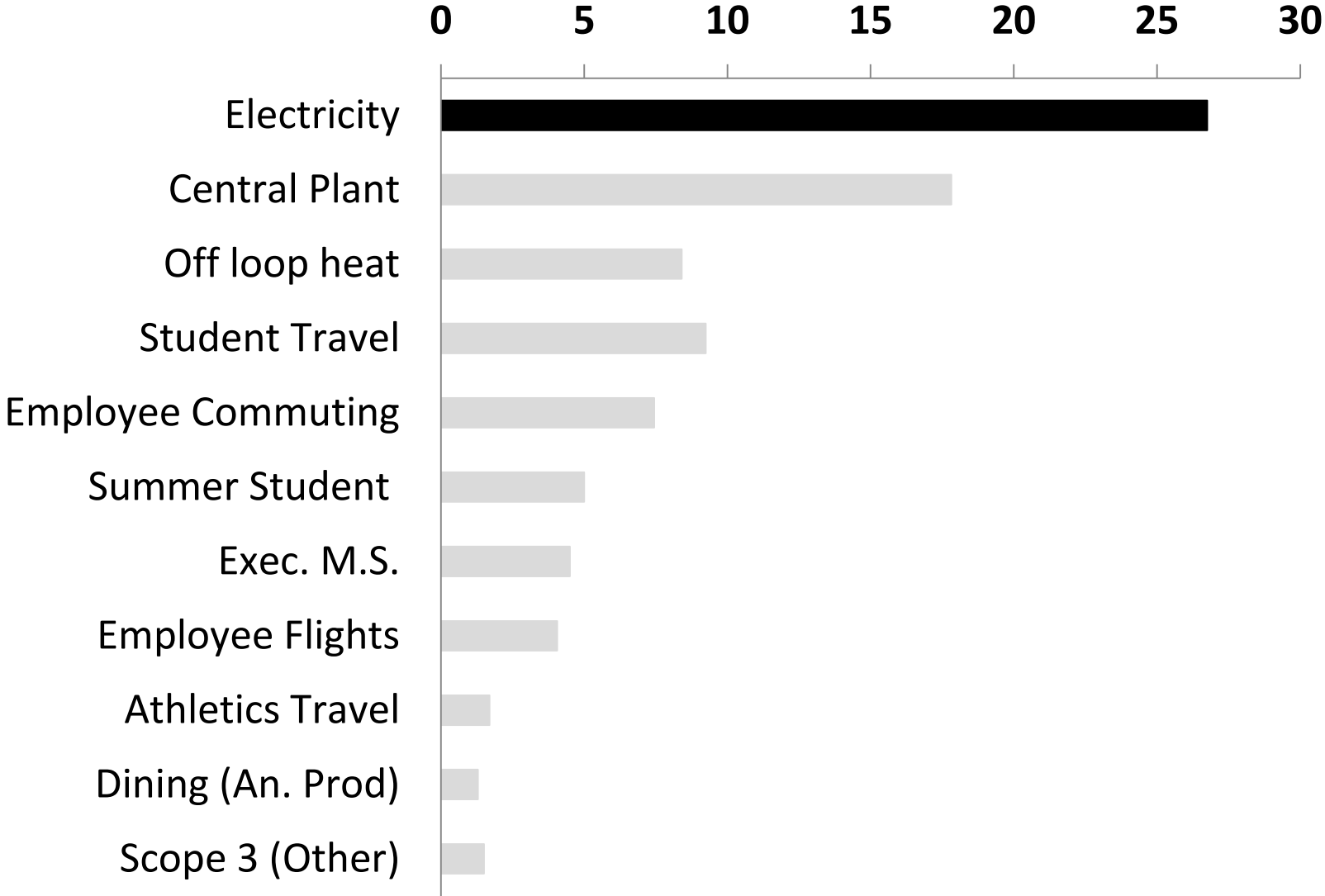
Partner with consultant to determine costs/time to eliminate combustion on campus (Ongoing).

Decide how much/how fast?

Scope 2: Electricity

Scope 2 Emissions

(Gg CO₂ eq)



Transition to renewables



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Customer  First
Renewables

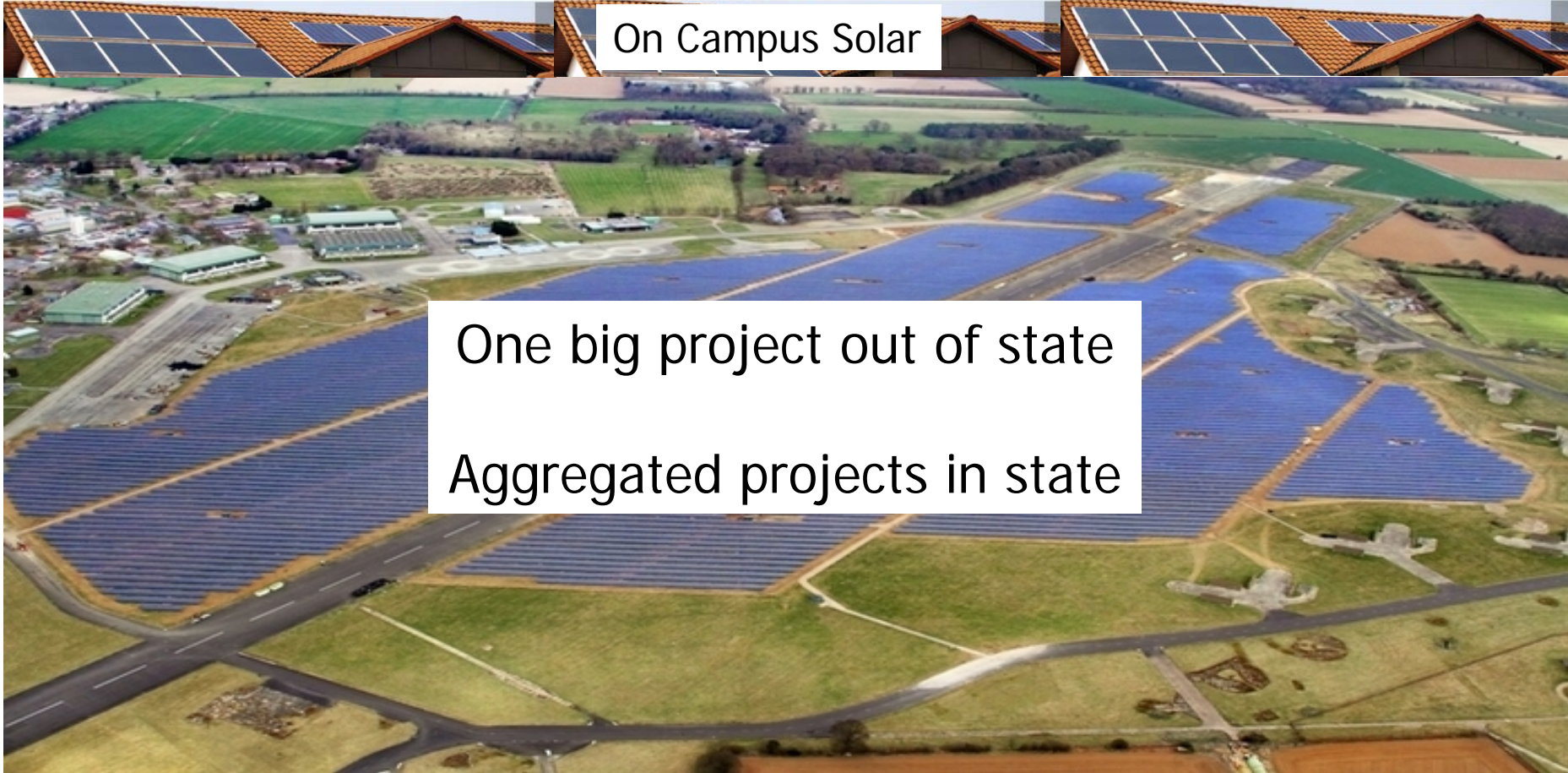
Scope 2: Solution

Offsets, Renewable energy credits

On Campus Solar

One big project out of state

Aggregated projects in state



Next Steps: Scope 2

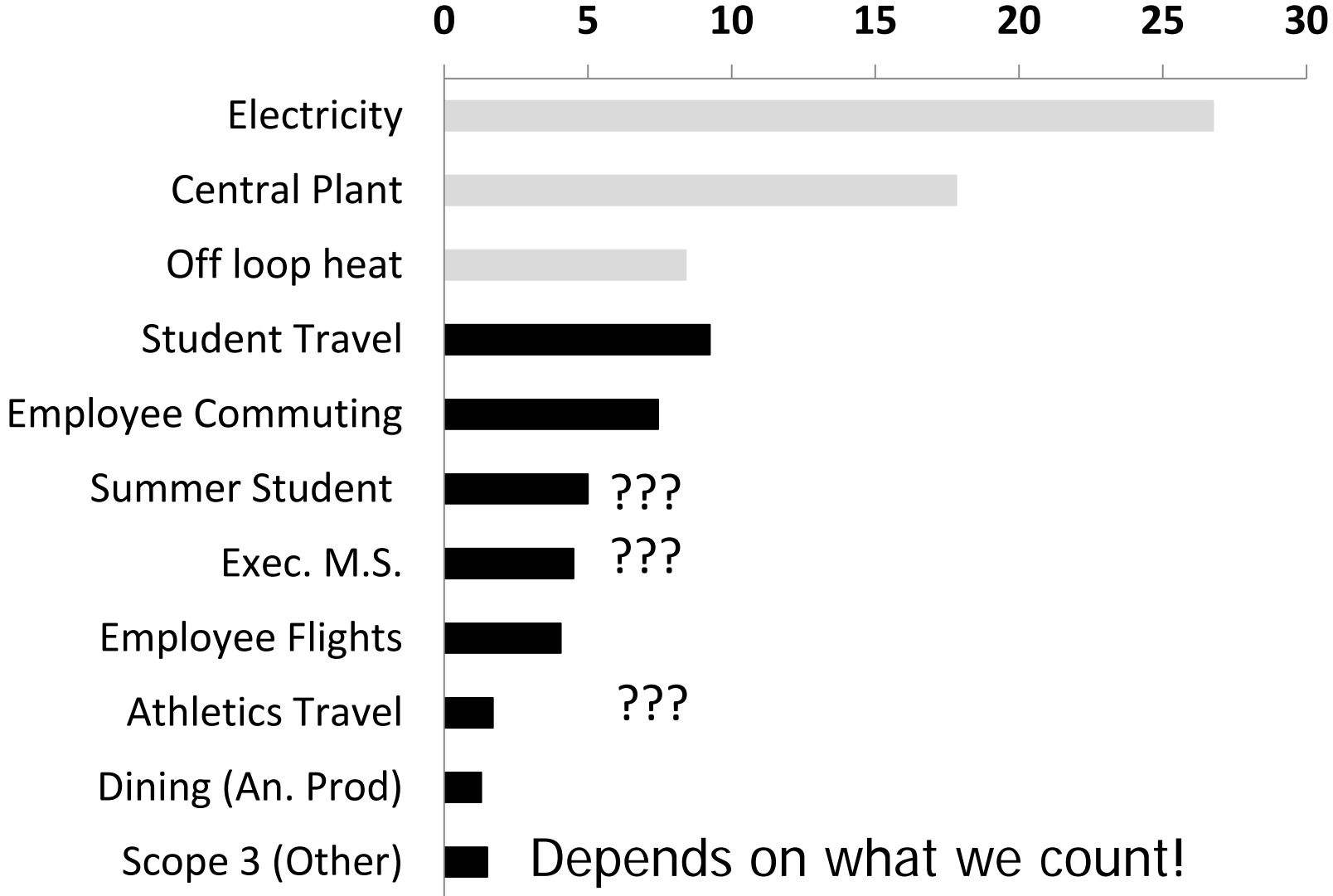
Issued RFP for power purchase

Bids being evaluated. Sign by August

Scope 3: Everything else!

Scope 3 Emissions

(Gg CO₂ eq)



Scope 3: Solution

Decide what to count.

Incentivize behavior change.

Scope 3: Considerations

Much of Scope 3 we can't eliminate.

Ignore?

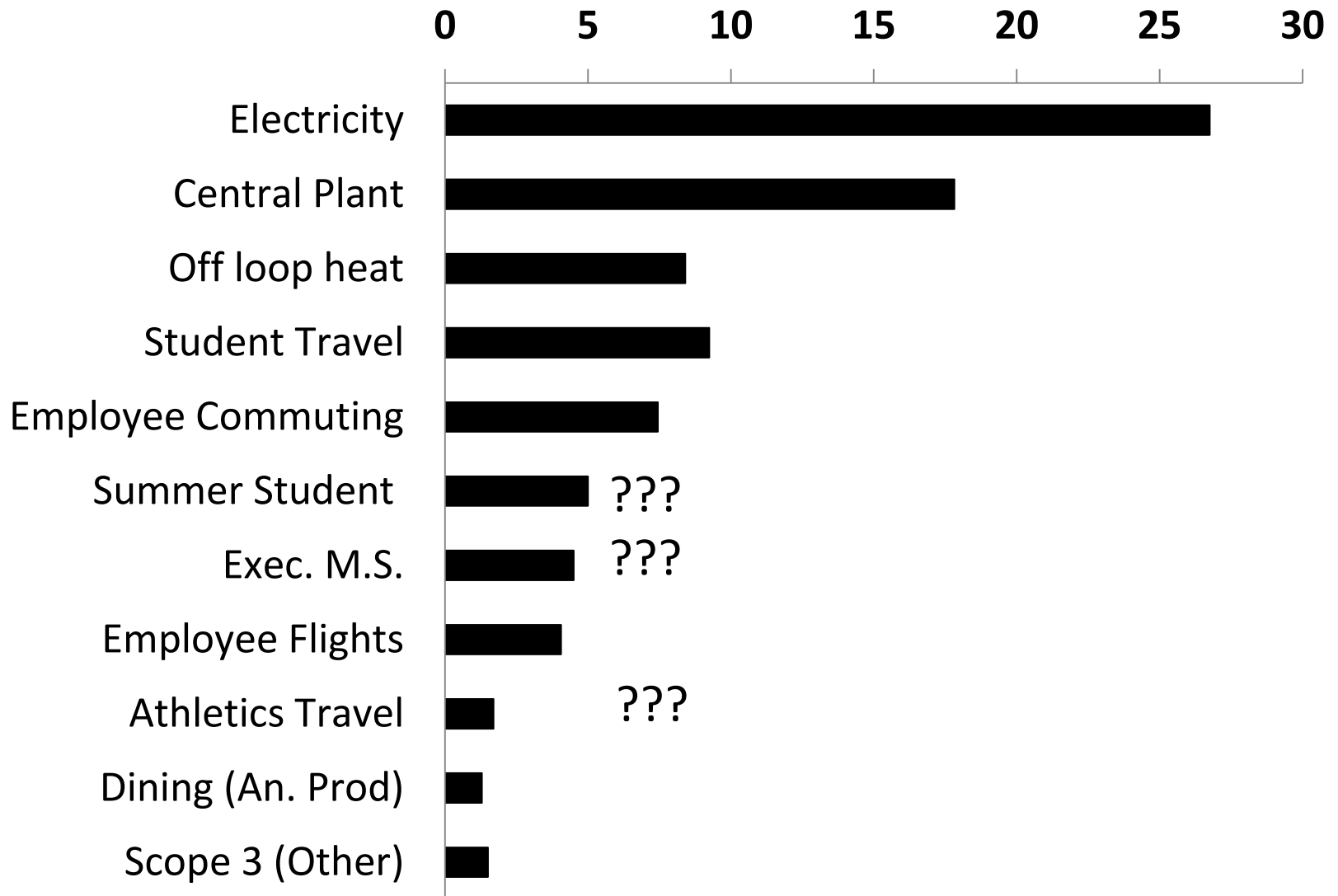
Buy offsets? At what \$/CO₂?

Scope 3: Who's doing what?

Category	Br	Ch	Col	Cor	Da	Du	Ge	Ha	JH	MIT	Pe	Pr	St	Ya
Purchased Goods and Services & Capital Goods	*						P	*		*			*	I
Fuel and Energy Related Activities	*	x		I	I	x	P		I					I
Upstream Transportation and Distribution	*						P							P
Waste	x	x	x	*	I	x	I	*	I	*	x	x		P
Business Travel	P	x	*	x	*	x	P	I	*	*	*	I	x	I
Employee Commuting	P	x	*	x	I	x	P	I		I	I	x	x	I
Leased Assets (Upstream)	P			x	x		*	x		x	x	x	x	
Leased Assets (Downstream)	*						P	*						P
Franchises	*						P				*			
Investments	*					*	P							*
		x: Tracking, goals, and public reporting												
		I: tracking internally												
		P: Planning to track												
		*: Assessing feasibility and/ or performed baseline assessment												

Brown's 2017 Emissions

(Gg CO₂ eq)





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A NEW PLAN FOR BROWN

**“engage in responsible
historical, fiscal, and
environmental stewardship
and sustainability”**

**“the most systematic
threat
to humankind remains
climate change”**

António Guterres
UN Secretary General
March 29, 2018

1) How much can we afford to do?

2) What do we count as "our" carbon emissions

Net zero by 2050?

Net zero by 2030?