Edits and comments on CDM mid term review on "budgets, targets, cost effectiveness" and "climate change" decks

Corrections to CDM mid-term review budgets, targets, cost effectiveness – phase 1, Aug 24, 2017 powerpoint:

- Slide 9: "The policies (e.g. Long-Term Energy Plan 2013 and Climate Change Action Plan) …"
- Slide 10:
  - "Targets ~~Metrics~~ associated with the *Climate Change Mitigation and Low-carbon Economy Act, 2016* and the Climate Change Action Plan are also shown for reference:
  - "~~Making government operations carbon neutral~~" – Suggest deleting since this action is independent of CDM – just use the line below that.
  - "Reducing Ontario Public Service emissions by 50% below 2006 levels by 2030"
    - Comment: For action items from CCAP, strange to focus on OPS GHG emissions. From a CDM perspective others would be more pertinent, e.g. for buildings and homes:
      - 1.1 retrofit social housing apartments
      - 1.3 provide incentives for apartment building retrofits
      - 2.1 and 2,2: retrofits for schools, hospitals, universities and colleges.
      - 4.1 boost low carbon technology in homes
      - 7.1 provide free energy audits for pre-sale homes
    - However, the above actions are not targets.
  - "Reducing GHG emissions by ~~9.8 Mt in 2020~~ 15% by 2020, 37% by 2030 and 80% by 2050 from 1990 levels."
    - Comment: Origin of 9.8 MtCO2e/y is unclear. Also, please note that the target reduction is not an absolute MtCO2e number but rather relative to 1990 levels. Absolute GHG emissions in 1990 and other years may be recalculated in future National Inventory Reports, so best to stick to percentages
- Slide 81:
  - Same changes as for slide 10.
  - "~~Addressing climate change in partnership with First Nations and Metis communities, and helping them derive economic benefit from climate-change-fighting actions~~ Work in partnership with First Nations and Métis communities to address climate change, and help to build capacity to participate in the economic opportunities that may arise from the actions."
  - "Addressing GHG pollution from existing cars, increasing availability of EVs and increasing access to transit." Add row for: "Province-wide electric and hydrogen passenger vehicle sales target of 5% in 2020." Ref: CCAP p19.
  - "Investing $325 million in the Green Investment Fund ~~to support economically viable projects that fight climate change~~ for projects that will fight climate change grow the economy and create jobs."
- Throughout presentations: Where numbers are annual, please show as such, e.g. 7 TWh/y.

Corrections to "Conservation Framework Mid-Term Review – Climate Change" powerpoint, file dated 2017-08-24:

- Slide 8:
  - "Ontario's *Climate Change Mitigation and Low-carbon Economy Act, 2016* ~~Climate Change Strategy (Nov 2015)~~ committed to a GHG emissions reduction goal of 80% from ~~(~~1990 levels~~)~~ by 2050"
  - "Previously, the Government committed to a 6% reduction (1990 levels) by 2014"

        - Comment: Possibly add that, "Ontario has exceeded its 2014 GHG emissions target, with more than 7% below 1990 levels".
    - "2014 goals were achieved largely due to the phase out of coal and economic recession"
        - Comment: This has been achieved through various initiatives, including: phasing out coal-fired electricity generation; using cleaner energy, including renewable fuels; increasing investment in clean technology; collecting landfill gas and expanding public transit.
    - Chart: "Ontario's *Climate Change Mitigation and Low-carbon Economy Act, 2016* ~~Climate Change Strategy~~"
    - Suggest updating to National Inventory Report 2017 data (the most recent available). E.g. "Ontario emissions peaked in ~~2005 at 211 MT CO2 eq~~2003 at 206 MtCO2e/y."
- Slide 9, 32,35: "Eliminating all electricity emissions (~5 MT) would only contribute 8% and 3% of to the 2030 / 2050 target~~s~~ed reductions , respectively."
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- Slide 12:
    - "The introduction of new initiatives and programs from Ontario's CCAP and the Federal Carbon Strategy will require sector stakeholders to identify opportunities of alignment across a number of areas – such as fuel switching~~,~~ including electrification~~, etc.~~ – in order to address potential:"
    - Areas of alignment: "Fuel switching including electrification; CHP / DER; ~~Electrification~~"
    - Alternatively, specify fuel switching for space and water heating, and electrification of transportation.
- Slide 14:
    - "Funding for fossil-fuel supplied CHP is at odds with Ontario's climate change ~~strategy if CHP~~ objectives when it offsets grid-electricity as it would increase GHG emissions and divert ~~which may displacing~~ funding from emissions-reducing technologies"
- Slide 14/15:
    - Electrification is a subset of fuel switching. Move "electrification" areas of alignment to "fuel switching". Alternatively, specify fuel switching for space and water heating, and electrification of transportation.
- Slide 24:
    - "MOECC's Climate Change Action Plan:
        - •Total estimated Greenhouse Gas Reduction by 2020: 9,832,000 Tonnes
        - ~~•New government greenhouse gas pollution target will be 37% below 2006 levels by 2030~~"
    - See comment on slide 10 of cost effectiveness deck. Also, note that the OPS target is 50% below 2006 levels by 2030.
- Slide 25:
    - Mixing up allowances and credits – recommend stick with one or be clear if switching from allowances to offset credits
    - Revenue projections are not $1.9B/yr.
- Slide 32:
    - "Ontario's Climate Change Mitigation and Low-carbon Economy Act ~~Ontario's Climate Change Strategy (Nov-2015)~~ committed to a GHG emissions reduction goal of 80% (1990 levels) by 2050"
    - "Areas of overlap and impact include fuel switching~~,~~ (including electrification), CHP and DER, and incentive stacking
- Slide 34: same changes as slide 8

- Slide 36: "~~Ontario's Climate Change Strategy~~ Relevant Climate Change Policies"
- Slide 37: "The electricity sector makes up ~~only~~ 4% of Ontario GHG emissions (~7 MT CO2e) in 20XX, so reductions ~~from electricity savings would contribute marginally to provincial targets~~ from the electricity sector alone would not achieve Ontario's reduction targets"
    - Comment: please be consistent with the electricity GHG emission number – 5 or 7 MtCO2e/y?
- Slide 38:
    - "Ontario's June-2017 auction had a settlement price of $18.72 per tonne"
    - "This program requires polluters to purchase an allowance for each tonne of CO2 equivalent that they wish to emit…." No one is required to purchase allowances; many are distributed free of charge; regardless, all that is required is for emitters to remit a number of allowances and credits equal to their emissions in the previous compliance period
    - "The government sets a cap on the total number of allowances sold…." No it does not. The regulation stipulates how many allowances are created each year. There is no limit on sales.
    - "The emissions cap will decrease by 4% per year to 2020, considered an aggressive rate of decline" 4%/yr may be considered aggressive by some, but others think the rate of decline should be steeper. Regardless, this is the slope that is necessary for Ontario to achieve its 2020 target.
    - "Proceeds from the cap and trade program will be directed toward the green initiatives outlined in the Climate Change Action Plan." Not all proceeds will be directed to CCAP initiatives. Suggest "Many proceeds…"
    - "Mid-size commercial and industrial customers will be protected from increasing energy costs with $1-1.3 billion in subsidies from cap and trade proceeds" source? Proceeds cannot be used for subsidised, only, as noted in other slides, to support greenhouse gas emissions reductions
    - "The impact of cap and trade is estimated at ~1.5 MT by 2030. Based on the CCAP's 37% target reduction by 2030 (65 MT), cap and trade accounts for approx. 2% of the target reduction (1.5 / 65)." From 2017 to 2020 the cap in the cap and trade program declines over 17 Mt. So the impact of cap and trade is at least 17 Mt reduction in emissions from 2017 to 2020. Caps for 2030 have not been set yet so it is not clear how ~1.5 Mt was derived. **Recommend delete this bullet.**
- Slide 51: same changes as slide 12
- Slides 53: same change as slide 14
- Slide 81: "Fuel Switching including electrification; CHP / DER; ~~Electrification~~"