



School District 19
(Revelstoke)

School District 19 (Revelstoke)

2012 Carbon Neutral Action Report

Executive Summary

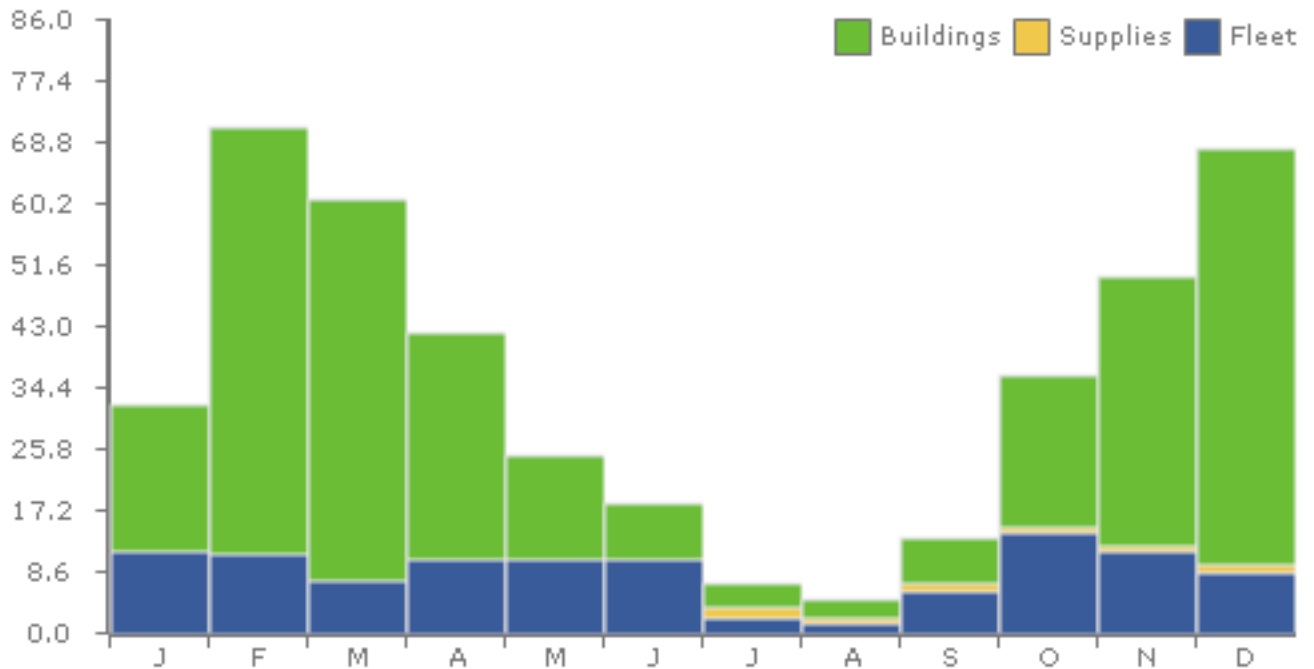
The mission statement of the Revelstoke Board of Education is “to provide all learners with an opportunity to acquire knowledge and skills according to individual potential, to develop positive attitudes towards life-long learning and to develop personal social values that will prepare them to participate in and contribute to, a healthy, sustainable and democratic society.”

We believe that modeling sustainable practices is an important part in achieving our mission. A key value in our school district is to create and nurture an environment in which appreciation of our natural environment is nurtured. This is accomplished through education around key themes related to conservation and sustainability in our natural environment. We believe that our efforts toward achieving carbon neutrality bring focus to our mission and values.

In addition to the commitment to reducing our environmental footprint, the efforts summarized in this report also contribute to reductions in operating costs, thereby enabling the district to channel funds directly into classrooms to sustain and enrich school programs and student services. In this way, the efforts of the school district to achieve the highest levels of success for students are further enhanced.

Total Emissions Calendar Year 2012 School District 19 - Revelstoke

Metric tonnes
CO₂ equivalent (tCO₂e)



Click on the bars to view data for each month

Totals Calendar Year 2012, School District 19 - Revelstoke

	Measure	Quantity	Greenhouse Gases in Tonnes				tCO ₂ e ¹
			CO ₂	BioCO ₂	CH ₄	N ₂ O	
Scope 1 (Direct) Emissions							
Mobile Combustion (Fleet)	Litres	40,934.01	102.28	3.87	0.01	0.01	109.00
Stationary Combustion, Reported ³	GigaJoules	4,586.79	273.65	0.00	0.00	0.02	279.86
Scope 2 (Indirect) Emissions							
Purchased Energy, Reported ³	GigaJoules	5,992.13	41.35	0.00	0.00	0.00	41.35
Scope 3 (Business Travel and Office Paper) Emissions							
Office Paper	Packages	1,120.00	7.14	0.00	0.00	0.00	7.14
Total Emissions, Calendar Year 2012			424.42	3.87	0.01	0.03	437
Carbon Neutral or Offset Exempt			87.31	3.87	0.00	0.01	93
Total for Offsets⁴			337.11	0.00	0.01	0.02	344

Each greenhouse gas has been converted to a standard measurement (tCO₂e) by multiplying its emissions by its global warming potential (GWP). The GWP of carbon dioxide (CO₂) from both anthropogenic and biogenic sources is 1; methane (CH₄) is 21, and nitrous oxide (N₂O) is 310. The Totals for tCO₂e are shown here rounded to the nearest whole metric tonne as only whole tonnes of tCO₂e can be purchased for offsets.

² Estimated data has been calculated based on the methods described in the Methodology Document.

Offsets Applied to Become Carbon Neutral in 2012

School District 19 has applied total emissions offsets to become carbon neutral for 2012. Some emissions are currently exempt from carbon offsets. *As required by section 5 of the Carbon Neutral Government Regulation, 93 tonnes CO₂e of emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2012. However, they were not offset as they are out-of-scope under section 4(2)(c) of the Carbon Neutral Government Regulation*

It was estimated that fugitive emissions from stationary cooling comprise about 0.01% of the total emissions of School District 19, and the ongoing effort to collect or estimate emissions from this source annually is disproportionately onerous. Thus, these emissions meet both the requirement to be below 1% of the School District's total emissions and the requirement to be onerous to collect. For this reason, emissions from this source have been deemed out-of-scope and are not included in the School District's total greenhouse gas emissions profile or offset purchase.

Emissions Reductions Activities – Summary

School District 19 (Revelstoke) continues to review energy consumption at all district facilities and to set targets for energy consumption reduction. In October of 2011, the district opened our new secondary school, and subsequently closed and demolished the old school. In September of 2012 we opened our new elementary school on the site adjacent to the new secondary school. Both of these facilities were built to a very high standard of energy efficiency and sustainability and both will be seeking LEED Gold certification. Further, the new elementary school facilitated the closure of two downtown elementary schools that were operating well below capacity and were in need of substantial upgrades to improve energy consumption levels. The district continues to provide facilities for community use, but with fewer, higher efficiency buildings, we have been able to reorganize community groups to maximize use in fewer sites allowing for shut downs at other sites to further reduce energy consumption .

This report highlights the steps being taken to ensure that our entire school community continues to develop understandings around the importance of reducing our carbon footprint, and to provide opportunities for staff, students, parents and community members to engage in meaningful conservation activities.



Mike Hooker

Superintendent

School District 19 (Revelstoke)

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Actions Towards Carbon Neutrality

The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act.

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Mobile Fuel Combustion (Fleet and other)					
Behaviour change program					
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	Reviewed anti-idling policy with staff and start of year bus driver meeting.	Review anti-idling policy with staff and start of year bus driver meeting.	2008	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress	Reviewed anti-idling policy with staff and start of year bus driver meeting.	Review anti-idling policy with staff and start of year bus driver meeting.	2008	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress	Further refinement of carpooling for maintenance staff in District vehicles	Further refinement of carpooling for maintenance staff in District vehicles	2008	No End Date (Continuous)
Vehicle fuel efficiency					
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	Removed old V8 powered crew van from service. Removed old 1/2 ton pickup from service.	Replace one V8 powered maintenance crew truck with new 2013 Ford Transit.	2012	2012
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	Applied for grant money to support purchase of new maintenance vehicle.	Replace one V8 powered maintenance crew truck with new compact vehicle (2013 Ford Transit).	2012	2013
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	Regular twice yearly maintenance for all maintenance vehicles. School buses have a monthly maintenance schedule.	Regular twice yearly maintenance for all maintenance vehicles. School buses have a monthly maintenance schedule.	2012	No End Date (Continuous)
Stationary Fuel Combustion, Electricity					
Behaviour change program					
Help staff reduce personal energy use through ""workstation tune-ups""	Not Yet Evaluated				No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Not Yet Evaluated				No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Not Yet Evaluated				No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Not Yet Evaluated				No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Not Yet Evaluated				No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress	Elevators operated by key cards and only issued as needed to staff. No student access to elevators.	Elevators operated by key cards and only issued as needed to staff. No student access to elevators.	2011	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Not Yet Evaluated				No End Date (Continuous)
Promote hot water conservation	Completed (in Reporting Year)	Low flow and automatic shutoff valves installed on sinks in both new schools as part of LEED Gold certification process.		2012	2012
IT power management					
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	Power management software is installed on all computers in school district.	Ensure that Power management software is used on all computers in school district.	2008	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	Auto-sleep for auto-off is scheduled on 50 percent of district computers.	Aim to achieve auto-sleep for auto-off scheduled on 95 percent of district computers.	2008	No End Date (Continuous)
Apply auto-sleep settings on printers, fax machines, and/or multi-function devices	Completed (in Previous Year)				No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	All computers purchases are low energy consumption models.	All computer purchases will be low energy consumption models.	2008	No End Date (Continuous)
Owned buildings					

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Establish energy performance baseline for owned buildings	Ongoing/In Progress	Acquired BC Hydro baselines for energy consumption and billing. Monitoring energy performance of 2 new schools to determine ways of achieving the projected energy savings associated with LEED Gold certification.	Reduce consumptions levels below baseline at older elementary schools. Monitor energy performance of 2 new schools to determine ways of achieving the projected energy savings associated with LEED Gold certification.	2012	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	Applied for LEED Gold certification for new elementary and secondary school.	Achieve LEED Gold certification for new elementary and secondary school.	2012	2013
Perform energy retrofits on existing, owned buildings	In Development	Worked with energy consultant to submit a plan for a minor capital project that would allow renovation of HVAC system at one elementary school.	Re-apply for a minor capital project that would allow renovation of HVAC system at one elementary school.	2012	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Not Yet Evaluated				No End Date (Continuous)
Retrofit details for owned buildings					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	In Development	Worked with energy consultant to submit a plan for a minor capital project that would allow renovation of HVAC system at one elementary school.	Re-apply for a minor capital project that would allow renovation of HVAC system at one elementary school.	2012	No End Date (Continuous)
Upgrade lighting systems during retrofits	Completed (in Previous Year)				No End Date (Continuous)
Upgrade/adjust control systems during retrofits	In Development	Include new DDC control system in conjunction with HVAC upgrade as part of minor capital project application.	Re-apply for HVAC upgrade as part of minor capital project application.	2012	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Not Yet Evaluated				No End Date (Continuous)
Supplies (Paper)					
Behaviour change program					
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	Staff continuing to expand their use of collaborative software rather than travelling to out-of-town meetings and training.	Staff continuing to expand their use of collaborative software rather than travelling to out-of-town meetings and training.	2010	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	All meetings are encouraged to be paperless wherever possible.	All meetings are encouraged to be paperless wherever possible.	2008	No End Date (Continuous)
Electronic media in place of paper					
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	Ongoing encouragement for staff to use online conferencing	Ongoing encouragement for staff to use online conferencing	2008	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress	Online conferences used for common documents and capital project documents. Revelstoke Secondary School staff are using electronic sharing of student information (Individual Education Plans) which results in a reduction of between 4000-5000 sheets of paper annually.	Online conferences used for common documents and capital project documents.	2008	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	In Development	New payroll software purchased.	Electronic payroll stubs are pending for next year.	2012	No End Date (Continuous)
Paper Type					
Purchase 30% post-consumer recycled paper	Not Yet Evaluated				No End Date (Continuous)
Purchase 40% post-consumer recycled paper	Not Yet Evaluated				No End Date (Continuous)

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The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act.

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Purchase 100% post-consumer recycled paper	Not Yet Evaluated				No End Date (Continuous)

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Actions to Reduce Provincial Emissions and Improve Sustainability

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Business Travel					
Behaviour change program					
Train staff in web-conferencing	Ongoing/In Progress	Staff continuing to expand their use of collaborative software rather than travelling to out-of-town meetings and training.	Staff continuing to expand their use of collaborative software rather than travelling to out-of-town meetings and training.	2010	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress	Staff continuing to expand their use of collaborative software rather than travelling to out-of-town meetings and training.	Staff continuing to expand their use of collaborative software rather than travelling to out-of-town meetings and training.	2010	No End Date (Continuous)
Policy and budgeting					
Create a low-carbon travel policy or travel reduction goal	Not Yet Evaluated				No End Date (Continuous)
Virtual meeting technology					
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	Staff continuing to expand their use of collaborative software rather than travelling to out-of-town meetings and training.	Staff continuing to expand their use of collaborative software rather than travelling to out-of-town meetings and training.	2010	No End Date (Continuous)
Make desktop web-cameras available to staff	Not Yet Evaluated				No End Date (Continuous)
Education, Awareness, and Engagement					
Awards/Recognition					
Establish a sustainability/green awards or recognition program	Not Yet Evaluated				No End Date (Continuous)
Staff Professional Development					
Support green professional development (e.g., workshops, conferences, training)	Not Yet Evaluated				No End Date (Continuous)
Include green options in employee performance measurement system	Not Yet Evaluated				No End Date (Continuous)
Staff awareness/education					
Provide education to staff about the science of climate change	Not Yet Evaluated				No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Not Yet Evaluated				No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress	New electronic "Green Team" conference established to raise awareness	New electronic "Green Team" conference established to raise awareness	2010	No End Date (Continuous)
Provide sustainability education during new staff orientation	Not Yet Evaluated				No End Date (Continuous)
Team-building					
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	In Development	New electronic "Green Team" conference established to raise awareness	New electronic "Green Team" conference established to raise awareness	2010	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Not Yet Evaluated				No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress	Included in school curricula	Included in school curricula	2008	No End Date (Continuous)
Other Sustainability Actions					
Adaptation to Climate Change					
Assessed whether extreme weather events and/or long term changes in climate will affect the organization's business areas	Not Yet Evaluated				No End Date (Continuous)
Integrated considerations of extreme weather events and/or long term	Not Yet				No End Date

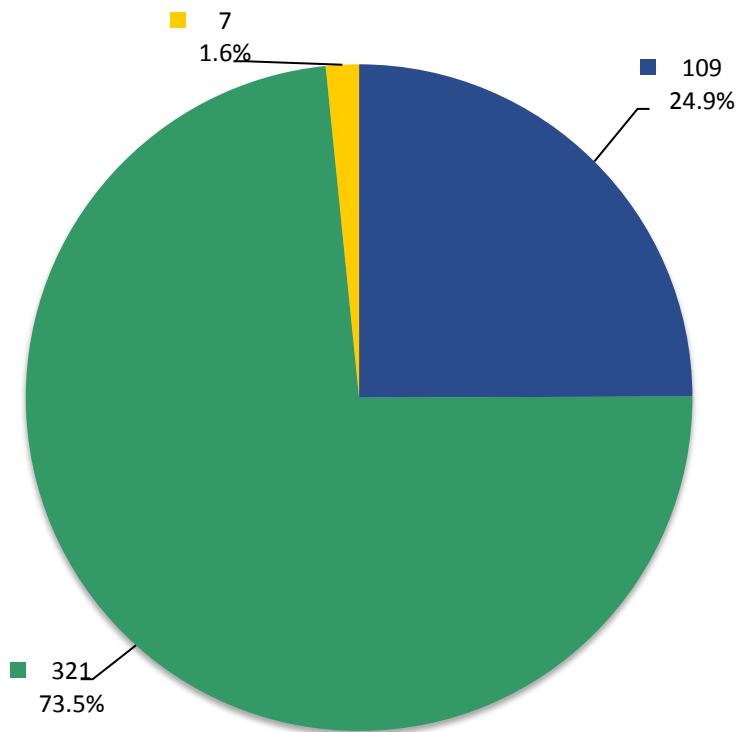
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The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
changes in climate into the organization's decision making.	Evaluated				(Continuous)
Building construction, renovation					
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Completed (in Reporting Year)	Construction of new elementary school adhered to LEED Gold certification requirements with regard to construction waste materials.		2012	2012
Incorporate lifecycle costing into new construction or renovations	Completed (in Reporting Year)	Life Cycle costing was used in the design and construction of the new elementary school.		2011	2012
Commuting to and from home					
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress	Staff are encouraged to participate in Bike to Work Week	Staff are encouraged to participate in Bike to Work Week	2010	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Completed (in Reporting Year)	New secondary and elementary schools have provision for staff shower.		2011	2012
Provide secure bicycle storage	Ongoing/In Progress	All schools have ample secure bicycle parking.	Provide additional new bicycle racks at three elementary schools.	2008	No End Date (Continuous)
Procurement (non-paper supplies)					
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	Not Yet Evaluated				No End Date (Continuous)
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	Ongoing/In Progress	Custodial and Maintenance supplies have switched to Green products wherever possible.	Custodial and Maintenance supplies have switched to Green products wherever possible.	2008	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress	Custodial and Maintenance supplies have switched to Green products wherever possible.	Custodial and Maintenance supplies have switched to Green products wherever possible.	2008	No End Date (Continuous)
Waste reduction/diversion					
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress	Waste paper and cardboard products are recycled throughout the District. Drink containers are recycled at all of our school facilities.	Waste paper and cardboard products are recycled throughout the District. Drink containers are recycled at all of our school facilities.	2008	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress	Future purchases of hazardous materials will be restricted. All electronic waste is recycled.	Future purchases of hazardous materials will be restricted. All electronic waste is recycled.	2008	No End Date (Continuous)
Water conservation					
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Not Yet Evaluated				No End Date (Continuous)
Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features	In Development	Landscaping at 2 new schools included low flow fixtures and reduction in landscaping that requires irrigation.	Review of irrigation at remaining facilities and elimination of irrigation at closed schools.	2012	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Completed (in Reporting Year)	New school construction eliminated use of storm drains and uses bioswales and other onsite devices to dispose of site runoff.		2012	2012

**School District 19 - Revelstoke
Greenhouse Gas Emissions by Source
for the 2012 Calendar Year (tCO₂e*)**



Total Emissions: 437

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2012 (Generated May 28, 2013 3:33 PM)

Total offsets required: **344**. Total offset investment: **\$8,600**. Emissions which do not require offsets: **93** **

*Tonnes of carbon dioxide equivalent (tCO₂e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.