

Minutes of College Energy Committee, 8th November 2012

Present: Eric Long (Chairman), Fintan McCann, Sandra Witherspoon, Connor Maguire, Nigel Moore, Kevin McGinnity(part), Gavin McQuaid, David Trimble, Jim Hill, Manus McHenry, Cathal Ellis, Garrett O'Sullivan(Secretary).

Apologies: Jim Breen, Alan Blackwood

The Chairman welcomed everyone to the meeting.

1. Matters arising.

F McCann reported that the service requirements for all CAFRE boilers are still not being implemented to the CAFRE requested standard. It is proposed that until this issue is resolved that each CAFRE site continues to implement their own PPM schedules for boilers including biomass boilers.

Action: - Continue to work with Properties Division to get the required PPM schedule put in place by Properties Division. (F McCann)

Action: - Ensure correct PPM schedule is implemented for each boiler across all CAFRE sites (F McCann, S Witherspoon, C Maguire, C. Ellis)

Carbon Trust Standard re-Certification

Re-accreditation plan will be finalised by January 2013.

Action: - Convene meeting of Carbon Trust Accreditation team to agree an action plan, by 31 January 2013. (E Long).

S Witherspoon reported that work on the Science boiler is awaiting asbestos removal work. As this work will involve removing of lagging that will have to be replaced when the new boiler is installed, it may be necessary to do asbestos removal when boiler is being replaced and not to leave pipe work unlagged. Therefore work may not happen till after the winter.

Action: - Progress replacement of boilers after asbestos removal and re-lagging (S Witherspoon)

An update of the consideration for the use of electric vehicle replacing a smaller site vehicle particularly at Greenmount Campus on a pilot basis is still required.

Action: - Provide update on considerations at the next quarterly Energy meeting. (J Breen)

C Ellis reported that there is a new agent for maintenance of KWB biomass boilers at Enniskillen and Greenmount HDC i.e. Original Heating who have replaced Rural Generation.

The review of the Biomass heating system at Loughry Campus has been requested via Properties Division. We are awaiting contact from them to set up meeting to review overall system operation. It is intended to undertake the work during November.

Action: - Report back to Energy Committee on outcome of review when completed(C Ellis)

G McQuaid reported that all oil tanks are now on the TRIM spreadsheet and have the personnel responsible to ensure they oil consumptions related to these tanks are accurate have been assigned. As a result the meeting to look at historical oil figures can now take place.

Action: - Hold meeting between N Moore, S Witherspoon, G McQuaid to review old oil figures for CAFRE. (S Witherspoon)

The dipping of some old oil tanks is required to ensure correct consumption for the month. Some of these tanks are difficult to do. It is required to look at installing 'watchman' type oil level gauges on these tanks to make stock checking more accurate.

2. Estate Energy Use

Scope 1 (Oil)

CAMPUS	Qtr 2 2011/2012	Qtr 2 2012/2013	% Change	YTD 2011/2012	YTD 2012/2013	% Change
Enniskillen	9,250	141	-98.5%	22,133	9,570	-56.8%
Greenmount Main Campus (incl GGA)	23,099	23,188	+0.4%	60,876	72,431	+19.0%
Greenmount- HDC	680	1,649	+240%	3,321	4,717	+42.0%
Greenmount- Farms*	1,000	1,000	0%	1,500	5,500	+367%
Greenmount Walled Garden Buildings	122	1,126	+922%	717	2,400	+334%
Generator	0	0	0	0	0	0
Greenmount Total	24,901	26,963	+8.3%	66,414	85,048	+28.0%

Loughry (excl FBIC)	14,300	13,921	-2.65%	41,596	40,042	-3.7%
CAFRE Total (excl FBIC)	48,451	41,025	-15.3%	130,143	134,660	+3.5%
FBIC	8,646	11,151	+29.0%	17,751	22,127	+24.7%
CAFRE Total (Incl FBIC)	57,097	52,176	-8.6%	147,894	156,787	+6.0%

*- Based on deliveries to the farms not actual consumption

Greenmount Campus indicated that the increased oil usage during the first quarter was primarily due to the GRC, Fulton Boyd and the Manor House. The increased use of these buildings for Centenary events would also have contributed to increased need for heating during this period.

Loughry Campus reported a 3.7% reduction in oil usage year to date. The new replacement boiler in Food Education has delivered a significant reduction in oil consumption in that building. However, there was also increased usage within the Admin building, after normal working hours by Communications Students in 2012 when compared to 2011

Enniskillen Campus achieved a 56.8% reduction in oil usage over the first half of 2012/13 when compared to 2011/2012. This is attributable to the full operation of the Biomass Boiler replacing the need to use oil heating for the campus.

Degree Day Corrected Campus Totals

Comparing the oil usage figures on a degree day basis "corrects" the data for variation in ambient temperature. Degree days' correction was applied to the oil consumption figures to eliminate the year to year temperature variations. The data for the first two quarters for 2012/13 and 2011/2012 are shown in the table below

Time period	Degree Days
Base(2006) (Apr-Sept)	596
2011/2012(Apr-Sept)	613
2012/2013(Apr-Sept)	798

It is notable that all campuses are lower than this increase indicating better management of oil usage with the colder weather.

CAMPUS	YTD 2011/12 Degree Day Adj. v Base	YTD 2012/13 Degree Day Adj. v Base	Change %
Enniskillen	21,519	7,147	-66.8%
Greenmount	64,572	63,519	-1.6%
Loughry(excl FBIC)	40,443	29,906	-26.1%
CAFRE(excl FBIC)	126,534	100,572	-20.5%
FBIC	17,258	16,526	-4.2%
CAFRE (Incl FBIC)	143,792	117,098	-18.6%

Overall the degree day adjusted figure for CAFRE including the FBIC shows an 18.6% reduction of overall oil consumption compared to the year to date consumption in 2011/2012.

The recording of all oil tanks particularly at Greenmount must be on the spreadsheet to ensure accurate measurement of consumption. All tanks relating to outlying buildings such as farms and walled garden are to be included on the spreadsheet.

Action: -TRIM spreadsheet to record all CAFRE oil tanks (G McQuaid)

Scope 2 (Electricity)

Campus	Qtr 2 11/12	Qtr 2 12/13	% Change	YTD 11/12	YTD 12/13	% Change
Enniskillen	82,713	89,391	+8.1%	191,998	193,259	+0.7%
Greenmount	318,832	335,548	+5.2%	703,412	727,519	+3.4%
Loughry (excl FBIC)	273,379	284,725	+4.1%	548,229	567,530	+3.5%
FBIC	186,492	207,455	+11.2%	347,338	394,878	+13.7%
Loughry (incl FBIC)	459,271	492,180	+7.2%	894,967	962,408	+7.5%
CAFRE total (excl FBIC)	674,324	709,664	+5.2%	1,443,039	1,488,308	+3.1%
CAFRE total (incl FBIC)	860,816	917,119	+6.5%	1,790,377	1,883,186	+5.2%

Greenmount Campus reported a 5.2% increase in electricity usage compared to the same quarter last year... This was as with oil consumption due to the increased usage of several buildings for large centenary events such as Greenmount Show.

Loughry Campus (not including the FBIC) reported an increase of 4.1%, which was attributed to more usage of the admin building by students and an increase in product work with clients at the FTC.

An increase of 11.2% was reported for the FBIC but this again due to the increased level of activity in the units which are fully occupied.

Enniskillen Campus reported an 8.1% increase in electricity consumption which was attributed to the increased level of events being run at the main Campus since the closure of Necarne.

Scope 3 (Biomass)

Campus	Tonnes Jul – Sep 2010	Tonnes Jul – Sep 2011	Tonnes Jul – Sep 2012	% change 11/12 v 12/13	kWh Jul – Sep 2012	Cost Jul – Sep 2012
Enniskillen*	n/a	35.36	20.06	-43%	74,190	£2407
Greenmount HDC*	27.60	28.36	15.10	-47 %	51,400	£1812
Loughry**	8.64	9.05	8.86	-2%	34,050	£948
DDC Pellet					14770	£591est.

*Wood chip delivered @ £120 Tonne (20% MC)

** Wood chip delivered @£106.96 Tonne (23% MC)

A review of the operation of the Loughry Biomass Heating system scheduled for this November, which will involve controls contractor MCA, R & S Biomass, EMU and CAFRE are awaiting date from H & J Martin. Wood chip for CAFRE is currently supplied through Northern Bio Energy on a temporary basis until completion of tender process.

The Renewable Heat Incentive (RHI) is applicable to the Enniskillen Biomass Boiler installation as it was installed after September 2010. C Ellis is in the process of completing the detailed application process to get this payment which will amount to 1.5p for every kWh of heat produced by this unit.

Scope 4 (Vehicle Fuel)

Vehicle fuel usage by fuel type and campus is now being reported quarterly. This information is also required for the Carbon Standard accreditation as it contributes to the overall carbon output of the College.

Campus	Fuel Type	Qtr 2 11/12	Qtr 2 12/13		YTD 11/12	YTD 12/13	Change %
Enniskillen*	Red Diesel	1,930	1,300		2,930	2,000	-31.7%
	DERV	2,044	2,255		2,080	4,741	+127.9%
	Petrol	215	191		544	404	-25.7%
Greenmount*	Red Diesel	11,000	12,200		24,394	26,249	+7.6%
	DERV	11,700	12,000		18,531	19,655	+6.1%
	Petrol	1,119	1,080		2,239	2,079	-7.1%
Loughry	Red Diesel	0	750 ¹		0	750	-
	DERV	730	700		1,530	1,645	+7.5%
	Petrol	-	-		-	-	-

CAFRE Total	Red Diesel	12,930	14,250		27,324	28,999	+6.1%
	DERV	14,474	14,955		22,141	26,041	+17.6%
	Petrol	1,334	1,271		2,783	2,483	-10.8%

*data based on deliveries not consumption

¹ Tractor Training courses run at Loughry.

The total volume of vehicle fuel consumed year to date has increased by 6.1% when comparing 2012/13 with 2011/12. This is mainly attributed to increased numbers doing tractor driving courses at Greenmount.

Action: - To continue to ensure that the 3 sites vehicle fuel usage by fuel type per quarter is collected prior to the quarter meeting and presented at each Energy Meeting. (J Breen)

Update on Water Reduction Work

Routine monitoring of water usage is continuing at Greenmount and Enniskillen Campuses, where the water leakage rate is minimal. The focus on leaks is mainly at Loughry Campus. S Witherspoon indicated that the leak rate at Loughry was now down to an acceptable 0.2m³/sec. Further leak detection work is out for tender.

Action: - S Witherspoon to ensure work is completed once tender has been reviewed and contractor appointed.

3. Update on Energy Projects

a) Voltage Optimisation

F McCann indicated that the project to install 3 voltage optimisation units will proceed within the current financial year.

b) Natural Gas Supply to Greenmount Campus

F McCann reported no further work on this project due to excessive cost of boiler conversions. However he will maintain contact with Firmus Energy to see if the situation would change.

c) Boiler conversions to Kerosene at Loughry Campus

Sandra Witherspoon indicated that the plan for converting the 35 sec oil boilers to kerosene at Loughry Campus was under discussion and that a plan is being drafted to implement this change.

d) Boiler Replacement Programme.

The programme of improving overall boiler efficiency by replacement of old inefficient boilers is progressing at Loughry and Greenmount Campus sites.

e) Energy Efficiency Projects.

The programme of improving overall boiler efficiency by replacement of old inefficient boilers is progressing at all three sites.

4. Technology Projects – Issues of Significance.

N Moore provided an update on the status of the Wind Turbine at Loughry Campus. It is hoped that the turbine will be inspected in early November to determine if and what work is required to allow the unit to be operated.

The path forward on the proposed installation of a PV system at Loughry campus was discussed. Properties division are to be included in discussions on the project. There is a proposal to offer a “free installation” of a unit but issues regarding the effect of the unit on the buildings and site within Loughry need to be taken in to account.

5. Communications

G McQuaid presented the final version of the Communication Plan presented by G. There was agreement that the communications need to be useful and targeted for best effect. Year end energy charts showing trend to date to be displayed in all areas. Each area manager is to determine the most effective method of getting information to their staff on quarterly energy performance.

Watt-monitor is to be revived and presentations on KTT energy projects to be removed from the plan.

Action: – Implement Energy Communications plan and determine what is to be presented, when and by whom. (G McQuaid)

E Long reported on the outcome of the Practical On-Farm Renewables Event (POFRE) at Greenmount on Tuesday October 30th 2012. Another very successful event with increased interest in the technology and issues seminars as against 2011. The Enniskillen event will be held next February 2013.

Action: - POFRE event at Enniskillen to be widely advertised by all energy committee members (ALL)

6. AOB

F McCann reported on the excellent Renewable Energy Expo that he attended in October. Many companies see the business benefit in being "seen as green". He has lots of literature available for review.

E Long reported that the work to finalise the CAFRE Energy Policy is ongoing and would be completed by the next Energy meeting.

Action: - Overall CAFRE energy policy targets for the year 2013 to 2015 to be finalised and issued (N Moore/E Long)

7. Date of Next Meeting

Wednesday 23rd January 2013, at 1.30 pm, Loughry Campus