FIFE ETHYLENE PLANT (FEP)

POST-FLARING BACKGROUND BRIEF FOR SCOTTISH GOVERNMENT

Example communications and engagement actions:

Advocacy – build a supportive / knowledgeable coalition

- Meeting held with Annabelle Ewing MSP
- Meeting held with David Torrance MSP
- Meeting held with Lesley Laird MP
- Site visit offered to Mark Ruskell MSP (four invitations)
- Site visit offered to Alex Rowley MSP (three invitations)
- Meeting agreed with Co-Leaders of Fife Council
- Meeting agreed with Chief Executive of Fife Council
- Meeting agreed with Chair and Vice-Chair of Fife Council Environment Committee
- Meeting requested with Director of Public Health for NHS Fife
- Invitations extended to all key MPs, MSPs, Councillors, Community Councils and Mossmorran Action Group for meeting at FEP

Education – build confidence, understanding and trust

- Plant visit invitations to be issued to local community
- Developing key fact sheets e.g. emissions
- Developing new Community Matters magazine direct to households
- Developing animation / video to demystify FEP operations
- Developing animation / video on flaring
- Website content being overhauled to better engage audience

Re-focus narrative – broaden beyond flaring

- Developing a campaign on economic, employment and social contribution of FEP
- Announcement of maintenance contracts e.g. https://www.dunfermlinepress.com/news/17670945.exxonmobil-say-work-at-forth-shore-will-take-them-into-new-era/?ref=rss
- Media interviews being secured with Plant Manager

Partners - encouraging support on public reassurance

- Fife Council encouraged to apply greater support to its Community Liaison Committee resourcing offered by ExxonMobil and Shell
- Fife Council encouraged to apply greater support to its Independent Air Quality
 Monitoring Group resourcing offered by ExxonMobil and Shell
- ExxonMobil and Shell offered to fund additional monitoring by Air Quality Monitoring Group

Wider background:

- Circa £35m contribution to Fife economy each year
- 210 core employees (circa 600 across both Mossmorran sites)
- 73 staff hold degree qualification or above
- Average salary of £56k (for background only)
- Over 120 local contractors and suppliers work for FEP
- £100m invested in maintenance in last five years alone
- 33% of staff started as apprentices
- 70% live within ten miles of FEP
- FEP is one of the youngest plants of its kind in Europe
- Historically-stated '25yr lifespan' was based only on the estimated economic supply of feedstock not operational or technical integrity.

From: [Redacted]

Sent: 22 March 2019 09:50:48 To: Public Engagement Unit

Subject: FW: ExxonMobil - Gender Pay Report

PEU,

Diary case please

Thanks

[Redacted]

Minister for Business, Fair Work and Skills

The Scottish Government

Edinburgh

Email: MinisterBFWS@gov.scot<mailto:MinisterBFWS@gov.scot>

Tel: [Redacted] Mobile: [Redacted]

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Begin forwarded message:

From: [Redacted]

[Redacted]@exxonmobil.com[Redacted]@exxonmobil.com>>

Date: 21 March 2019 at 21:22:41 GMT

To:

"Jamie.Hepburn.msp@parliament.scot<mailto:Jamie.Hepburn.msp@parliament.scot>

<Jamie.Hepburn.msp@parliament.scot<mailto:Jamie.Hepburn.msp@parliament.scot</pre>

Subject: ExxonMobil - Gender Pay Report

Mr Hepburn

ExxonMobil, operator of the Fife Ethylene Plant, today published its 2018 UK Gender Pay Report: https://www.exxonmobil.co.uk/en-gb/company/gender-pay

At 3.9%, our pay gap is significantly lower than the UK average of 17.9%. Furthermore, it highlighted that 30% of ExxonMobil?s UK workforce hold management positions, and that 41% of our UK graduate recruits were female, far higher than the proportion of women STEM graduates nationally (24%).

As a company, we are making progress, but we are not complacent in our drive to narrow the gender pay gap. There is much still to do to sustain and improve on these results and we remain focused on continued improvement.

In your capacity as Minister for Business, Fair Work and Skills, we would be delighted to discuss the report and our work with you in more detail. Do please let me

know if you would value a meeting.
Regards
[Redacted]
[Redacted] [Redacted] - Fife Ethylene Plant
ExxonMobil Chemical Fife Ethylene Plant, Beverkae House, Mossmorran, Cowdenbeath Fife, Scotland, KY4 8EP Office: [Redacted] Cell: [Redacted]

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By email to: @exxonmobil.com

Dear

Our ref: 'Decarbonising Scotland's Industrial Sectors and Sites'

15th April 2019

I am writing to invite you to participate in a workshop at the Lighthouse in Glasgow on April 30th. This is part of Scottish Government's ongoing engagement with industrial stakeholders on the challenges of decarbonising the sector.

Following on our previous engagement, our analysis shows that, with the right infrastructure, industrial decarbonisation is an economic investment opportunity that could also attract new industries to Scotland. A discussion paper will be made available before the workshop that profiles existing Scottish energy intensive industries (EII) and examines existing advice and support. The workshop will build on the paper to examine:

- How can we build support for the required industrial decarbonisation investment in collaboration with Scottish industrial stakeholders?
- How can we realise the potential of industrial decarbonisation to boost local economies and supply chains; with consequential benefits for the livelihoods of people and places connected to industrial sites?

Investing in energy efficiency or other ways to reduce carbon emissions will develop a more sustainable industrial sector. However, it is only by working in collaboration that we will create a support framework, then a detailed plan, to deliver the transition required.

The workshop will deliver a shared understanding of the most important activities to incentivise industrial decarbonisation in Scotland, and the next steps to overcome financial barriers in this area.

In addition to this letter, an EventBrite link will shortly be made available, where you can register your attendance. If you have any questions on the workshop, please reply to me or my colleagues at <u>Ell@gov.scot</u>.

Yours sincerely









Minister for Business, Fair Work and Skills Jamie Hepburn MSP



T: 0300 244 4000 E: scottish.ministers@gov.scot

[Redacted]

Fife Ethylene Plant ExxonMobil Chemical

Reply by email to: [Redacted]@exxonmobil.com

Our ref: 2019/0009167 24 April 2019

[Redacted]

Thank you for your email of 21 March 2019 to Mr Hepburn, MSP, Minister for Business, Fair Work and Skills, inviting him to have a meeting to discuss ExxonMobil's 2018 UK Gender Pay Gap Report.

Mr Hepburn would be pleased to have a meeting to discuss the report. Please contact MinisterBFWS@gov.scot to make the necessary arrangements.

[Redacted]

Private Secretary

Scottish Ministers, special advisers and the Permanent Secretary are covered by the terms of the Lobbying (Scotland) Act 2016. See www.lobbying.scot





May, 2019

Fife Ethylene Plant Flaring BAT Evaluation

Energy lives here

This presentation includes forward-looking statements. Actual future conditions (including economic conditions, energy demand, and energy supply) could differ materially due to changes in technology, the development of new supply sources, political events, demographic changes, and other factors discussed herein (and in Item 1A of ExxonMobil's latest report on Form 10-K or information set forth under "factors affecting future results" on the "investors" page of our website at www.exxonmobil.com). This material is not to be reproduced without the permission of Exxon Mobil Corporation.

Overview

- Recent flaring events (June 2017, Mar/May 2018, April 2019) have attracted significant community, media and regulator attention. The impacts of flaring on local community amenity has been described as 'unacceptable' and poses a threat to the facility's License To Operate.
- The regulator undertook enforcement action following June 2017, issuing operating permit variations on both Shell UK Limited FNGL and ExxonMobil Chemical Limited FEP which required 'an evaluation of Best Available Techniques to prevent and, where that is not practicable, to reduce emissions of noise, vibration and smoke associated with flaring to be undertaken.
- The FEP 'BAT' evaluation identified several actions that need to be undertaken to demonstrate responsible operation for foreseeable future, and concluded that the key technique to minimising visual, noise and smoke impacts associated with flaring is to preferentially route as much flare gas as is practical to appropriate ground flare technology rather than elevated flare
- The Best Available Technique (or 'BAT') evaluation was submitted to the Executation on 30th April 2019 with a proposed implementation plan.

Evaluation Approach

- Seven major areas were evaluated to assess 'BAT';
 - 1. Prevention and minimisation of flaring
 - 2. Preferential use of ground flares
 - 3. Advanced flare design
 - 4. Reliability of processes and equipment
 - 5. Appropriate monitoring and recording
 - 6. Noise suppression techniques
 - 7. Visual impacts
- FEP's approach was a data driven, sound-science based evaluation of each BAT aspect. The resulting implementation plan allows FEP to work with the regulator to align on the forward strategy, building credibility and ensuring effective outcomes.
- This approach builds the sites understanding of impact on the environment, targeting improvements and enhancing performance in line with business objectives

BAT Conclusions

- The FEP evaluation has identified that the majority of currently defined best available techniques are applied to flaring at FEP.
- BAT is demonstrable for all areas relating to the elevated flare
- Technical analysis identified 12 process improvements involving;
 - Minimising the plant throughput, and associated flaring rates during process upsets
 - Minimising start-up duration, and associated period of flaring during process upsets
 - Maximising opportunities to recover or reroute flare gas to an alternate use
- Specialist assessment concluded 'acceptable' noise levels are not clearly defined or quantifiable but an approach is needed to demonstrate future compliance
- Four areas were identified where current techniques did not meet the definition of 'best available';
 - Use of ground flares is limited due to low reliability
- Ground flare technology is outdated ExonMebiokeless capacity of the ground flares is insufficient
 - Available noise control techniques have not been incorporated on the

BAT Implementation Plan

- One major improvement has been identified to address the four areas where current techniques did not meet the definition of 'best available'
 - FEP has committed to increasing the capacity of, and accessibility to, best available ground flare technology that minimises amenity impact
 - FEP is working towards implementation of this objective by 2024.
- Additionally, 12 process improvements, and continued work to define 'acceptable' noise are proposed.
- Implementation of these improvements is expected to further reduce the amenity impact experienced by communities during flaring.
- Reference is made to the Shell FNGL Flaring BAT Evaluation for proposed actions relating to the existing ground flares

Backup

		_
BAT Aspect	Action	Target Date
Use of Ground Flares	Continue targeted noise monitoring per agreed action plan with Specialist Consultant	Ongoing as Required
Prevent/ minimise flaring	Update start-up procedures to add specificity to rate/speed of start-up progression for key equipment (C-R-51, PGC, C-T-51/52 etc.)	31-Dec-19
Prevent/ minimise flaring	Apply new technology and conduct trial to improve and sustain cold flare vaporiser performance	31-Dec-19
Prevent/ minimise flaring	Develop and implement a post-safepark flare minimisation procedure including associated training and implementation reviews	31-Dec-19
Prevent/ minimise flaring	Conduct a technical review of R-C-01 and R-C-02 surge margins to determine minimum operating points. Implement if appropriate.	31-Dec-19
Prevent/ minimise flaring	Install jumpover line from demethaniser bottoms line to reboiler inlet line to reduce reboiler start-up time	31-Dec-20
Prevent/ minimise flaring	Undertake test of utilising H2 supply to reduce converter start-up to determine effectiveness	31-Dec-20
Flare design	Replace elevated flare tip technology with best-available at the next feasible opportunity	31-Dec-20
Prevent/ minimise flaring	Implement sustainable training program using cold end console dynamic simulator	31-Dec-21
Prevent/ minimise flaring	Pursue existing Steam Team strategy including targeted 2020 repair program to increase leak responsiveness	31-Dec-22
Prevent/ minimise flaring	Conduct technical review to determine requirements for reinstating boiler air preheaters	31-Dec-22
Prevent/ minimise flaring	Conduct technical review to determine feasibility of re- routing PGC discharge to fuel	31-Dec-23
Prevent/ minimise flaring	Conduct technical review to determine feasibility of re- routing ejector from Q-T-01 overheads to fuel	31-Dec-23
Flare design	Increase capacity of, and accessibility to, ground flare technology that minimises amenity impact	31-Dec-24
Flare design (ground flare)	Refer to Shell FNGL BAT Evaluation	-
Reliability (ground flare)	Refer to Shell FNGL BAT Evaluation	-
Suppression of noise (ground flare)	Refer to Shell FNGL BAT Evaluation	-
Visual Impact (ground flare)	Refer to Shell FNGL BAT Evaluation	-



From: [redacted s.38(1)(b)] < [redacted s.38(1)(b)]@exxonmobil.com

Sent: 23 May 2019 15:54

To: Mark.Ruskell.msp@parliament.scot

Subject: Invite - Community Representatives Meeting

Dear Mr Ruskell

On behalf of Jacob McAlister, Plant Manager of the Fife Ethylene Plant (FEP), we would like to invite you, or a representative, to join us at FEP for a question and answer session directly with members of our Plant Management Team.

As a community representative, we would value the time to provide greater insight to our operations, and give you the opportunity to raise the issues that matter to your constituents. Furthermore, we will provide you with detail on the comprehensive actions we will take to further minimise instances and impact of flaring events.

In wishing to accommodate as many representatives as possible, we are proposing three options and will select the one that meets the majority of availability.

By return, could you advise us of your preferred date from those below and confirm if it will be yourself or a representative attending?

27 June 6pm - 8pm

16 July 6pm - 8pm

18 July 6pm - 8pm

Once we have identified the date, we will provide further information to you.

Regards

[redacted s.38(1)(b)]

ExxonMobil Chemical

Fife Ethylene Plant, Beverkae House, Mossmorran, Cowdenbeath Fife, Scotland, KY4 8EP [redacted s.38(1)(b)]



ExxonMobil Chemical Limited Fife Ethylene Plant Beverkae House Mossmorran, Cowdenbeath Fife KY4 8EP

Tel 01383 737000 Fax 01383 515253

Community Statement

Date: Friday 14 June 2019

Time: 15.40hrs

Statement: 02

Dear Community Member,

I write to advise that normal operations have resumed at Fife Ethylene Plant. Our team worked swiftly to identify and resolve the mechanical issue that led to the elevated flaring.

We apologise for any inconvenience the flaring may have caused.

The flare is an essential part of the plant's systems and we would like to assure you that there was no danger to local communities or staff on site.

If you require any further information, please contact us on Tel. 01383 737 000 or fep@exxonmobil.com

Ends

From: [redacted s.38(1)(b)]
DECC: Energy Industries
02 September 2019

Minister for Energy, Connectivity & Islands

EXXONMOBIL INVESTMENT STRATEGY – FIFE ETHYLENE PLANT, MOSSMORRAN

Purpose

 To provide a brief summary of the investment strategy being developed by ExxonMobil Chemical Ltd at the Fife Ethylene Plant (FEP), and to recommend that you meet Jacob McAlister, plant manager at FEP, to discuss these plans further.

Priority

2. **Urgent**. ExxonMobil is currently seeking board level approval for a significant package of investment and are keen to meet Scottish ministers to discuss.

Background

- 3. The Fife Ethylene Plant (FEP), owned by ExxonMobil, is co-located with the Fife Natural Gas Liquids plant (FNGL) owned by Shell, at Mossmorran. The FEP uses liquid natural gas feedstock from the North Sea to produce Ethylene. Around half the Ethylene produced is delivered to the UK Ethylene pipe network, with the remainder exported to the Antwerp petrochemical hub for global markets, via the Braefoot Bay Marine Terminal.
- 4. The plant represents a significant employer in the Scottish and Fife economies, employing around 170 employees directly, the majority of which live within six miles of the plant. The plant also engages around 120 companies across Scotland in supplying a range of goods and services to the site.
- 5. Industry figures estimate that current activity at the site is worth approximately £32 million per annum to the local economy.

Environmental Performance

- 6. Low reliability at the site has resulted in the increased frequency of unplanned outages over the past 2 years, leading to periods of sustained elevated flaring activity over and above that expected as business as usual. SEPA has previously issued final warning letters to both operators in April 2018 in relation to unplanned flaring in June 2017.
- 7. This activity has led to a significant number of complaints by local residents. Local campaigners including residents and councillors are calling for the Scottish Government to commission an independent health and social impacts study on the impacts of flaring at Mossmorran.

- 8. A prolonged period of flaring in April 2019 led SEPA to initiate a formal regulatory investigation, a process that is ongoing. HSE has also been engaging with ExxonMobil to assess the impact of additional outages.
- 9. The most recent unplanned outage on 13 August, relating to the loss of steam on site, has resulted in a temporary cessation of activity. ExxonMobil are using this shutdown period to carry out essential site maintenance. We expect the plant to remain closed until around November 2019 while this work continues.
- 10. In response to these reliability issues, on the 23 August, SEPA served operating permit variations on ExxonMobil Chemical Limited and Shell U.K. Limited to require both operators to achieve 'Best Available Techniques' at Mossmorran in the shortest timeframe possible. The variations are designed to reduce the impacts of flaring on local communities when it is necessary.
- 11. Engagement on environmental impacts/compliance is being led through the ECCLR Portfolio.

Proposed Investment

- 12. ExxonMobil is developing a significant package of investment to improve reliability and efficiency at the site, with a view to addressing the issues raised by SEPA, and therefore adopt the 'Best Available Techniques'.
- 13. The overall value of the investment package is estimated at £160m, the majority of which is expected to be committed by September 2020. The package includes upgraded flare tips to reduce noise impacts, new generators to improve site efficiency, pipeline upgrades and a new control electronics system.
- 14. In addition, the package will also cover new ground flares or equivalent, to reduce the reliance on elevated flaring, albeit these are expected to be deployed over a longer timescale. The timescale of this investment is subject to dialogue between SEPA and the site operator. This means that elevated flaring will continue to be carried out at the site in the coming years.
- 15. ExxonMobil estimate the overall investment package will support around 850 contractor jobs, with goods and services sourced from around 40 companies across Scotland. Given the reliance on on-site engineering and wider support activity, it is anticipated that a substantial proportion of the investment will be retained in Scotland.
- 16. ExxonMobil has also indicated a willingness to explore the role the site can play in transitioning to a net zero economy. Currently, the site generates a significant quantity of hydrogen as a by-product of production, and are interested in beginning a dialogue with stakeholders about how a more reliable site can work in partnership to reduce emissions beyond the site gates.

Next Steps

17. You are invited to agree to meet Jacob McAlister, FEP Plant Manager, to discuss the proposed investment, prior to any public announcement. Given the timescales being proposed, it would be helpful if this meeting took place in the week commencing the 9th September.

[redacted s.38(1)(b)]
Energy Industries, DECC.
Ext. [redacted s.38(1)(b)]

		For	For Information		tion
Copy List:	Acti	Com	Portfolio	Constit	General
	on	ments	Interest	Interest	Awareness
Cabinet Secretary for Environment, Climate Change and Land Reform Cabinet Secretary for Transport, Infrastructure and Connectivity			X X		

Kersti Berge, Director (DECC)

Andy Hogg, DECC: Energy Industries

[redacted s.38(1)(b)], DECC: Energy Industries

Don McGillivray, ENFOR, Env Quality

[redacted s.38(1)(b)], ENFOR, Env Quality

[redacted s.38(1)(b)], ENFOR, Env Quality

Leanne Dobson, Special Adviser Callum McCaig, Special Adviser

SG - EXXONMOBIL MEETING SUMMARY NOTE

12 September 2019, Scottish Parliament 10:45 – 11:30

SG Attendees:

Minister for Energy, Connectivity & the Islands Paul Wheelhouse MSP [redacted s.38(1)(b)] Scottish Government; [redacted s.38(1)(b)] Scottish Government.

ExxonMobil Attendees: Jacob McAlister (Plant Manager, Fife Ethylene Plant); [redacted s.38(1)(b)] ExxonMobil.

<u>Update on Operations</u>

- Due to ongoing SEPA investigation (to report Nov. 2019), ExxonMobil is limited in terms of the quantity of information it is able to provide at this time.
- JMc outlined how steam is critical to the plant's operation and how steam has been integral to the functioning of the plant since construction in 1980s.
- In August, FEP was brought offline in 2 days which is record timing for ExxonMobil operations.
- JMc explained that the messaging observed recently in relation to a 20+ asset lifetime is misleading according. This 20 year forecast was comprised on the basis of feedstock availability and not the expected lifetime of the asset infrastructure or component parts.
- ExxonMobil recognises that performance requires improvement and has received authorisation from HQ in Houston, Texas, to announce a significant investment in the Fife plant.
- JMc outlined that the plant cannot resume operations under the same conditions as when it closed and will relaunch in a better position maximising the downtime to make improvements and undertake maintenance work. These maintenance improvements are necessary.
- The intention is to have the boiler circuit repaired in order for the plant to resume operations in Q4 2019.
- A number of positive infrastructure fixes can only be made while the plant is shutdown and this period will be used to make such fixes.

Investment Announcement

- ExxonMobil representatives outlined a £140m investment in FEP additional to the annual preventative expenditure of £20m.
- The investment will deliver 850 construction jobs and procure supplies from 40 local businesses.
- £140m will be invested across 2019-20 and involve the installation of Best available Technology (BAT), addressing reliability issues.
- The investment will aim to directly address the concerns of the regulator (SEPA) and the local community.

- Acknowledging the low carbon transition, as described by the Minister, ExxonMobil's investment will improve the sustainability, viability and efficiency of FEP.
- JMc described that the investment, by increasing reliability, will mean a reduced likelihood of flaring. The specific technology to be installed (a state-of-the-art flare tip costing £2m) will mean, that, in instances of flaring, the intensity will be reduced as both noise and vibration will decrease.
- JMc stated that the business is enacting all of SEPA's demands and that ExxonMobil is demonstrating a willingness to address the site's challenges.

Oil & Gas / Energy Transition

- [redacted s.38(1)(b)] explained that with reduced flaring, FEP's CO2 emissions will fall significantly.
- The Minister explained that SG continues to support the oil & gas industry whilst embracing diversification.
- [redacted s.38(1)(b)] offered a representative from ExxonMobil Europe to present to SG's Oil & Gas Industry Leadership Group (ILG), to share information on the positive steps that ExxonMobil is taking throughout the organisation in relation to the energy transition.
- [redacted s.38(1)(b)] offered to share with ExxonMobil the membership of the ILG.
- The Minister described the ACORN project and the opportunity that hydrogen presents as a fuel source, given the volume of hydrogen that FEP generates.
- The Minister raised the question of how Exxon's excess hydrogen may be used to decarbonise the wider network, describing the potential of the fuel source – citing hydrogen trains as an example of advances being made in Germany.
- [redacted s.38(1)(b)] described how ethylene is used in the plastic bodies of light weight / electric vehicles, an example of production contributing to the energy transition.

MINISTERIAL ENGAGEMENT BRIEFING: PAUL WHEELHOUSE

Event Title: Meeting with ExxonMobil Fife Ethylene Plant manager, Jacob McAlister

Date: 12 September 2019, 10:45 – 11:30

Key Message	It is welcome to see significant investment being proposed at one of our strategic industrial sites. Improvements in efficiency are required to put us on a path to deliver our net zero ambition. Given the significant issues experienced by the local community, investment which improves the reliability of the site and reduces the need to flare is essential to rebuild relationships with stakeholders.
Who	Jacob McAlister, ExxonMobil Fife Ethylene Plant manager – FEP manager since December 2018, formally Exxon Project Manager in Houston, Texas [redacted s.38(1)(b)], ExxonMobil Fife Ethylene Plant external affairs
	manager – formally SG and Scottish Fire & Rescue communications adviser.
What	ExxonMobil has asked to meet to discuss with Mr Wheelhouse the proposed £160m investment in the Fife Ethylene Plant at Mosmorran.
Why	The Fife Ethylene Plant has experienced a number of unplanned outages, resulting in significant elevated flaring. In response, SEPA have varied the ExxonMobil operating permit requiring the adoption of 'Best Available Techniques' at Mossmorran in the shortest timeframe possible.
	To address these issues, ExxonMobil have developed an investment package designed to improve the reliability and efficiency of the site, and are keen to discuss this package with Mr Wheelhouse.
	ExxonMobil are likely to ask for an endorsement of the proposed investment package.
Where	Scottish Parliament, T3.02
When	Thursday 12 th September, 10:45 to 11:30.
Supporting Official	[redacted s.38(1)(b)] [redacted s.38(1)(b)] [redacted s.38(1)(b)]
Attached documents	Annex A: Key points & plant background Annex B: Environmental Performance Annex C: Investment Plans

ANNEX A - Key Points & Plant Background

- I am keen to understand the programme of investment being proposed and what impact it will have in addressing the environmental issues at the site, in the short and long-term.
- Given the scale of investment being proposed, and the importance of the site to the local economy, I am keen to know what the economic benefit will be locally and across Scotland.
- I am also interested in the long-term plans for the site. For example, I am aware that significant volumes of hydrogen are produced at the site. I would be keen to understand what plans you have in place that could see this resource being used to help other parts of the energy system decarbonise.

<u>Suggested response if asked for an endorsement of the proposed investment:</u>

- We welcome this investment to improve the reliability of the site, and therefore address the issues identified by SEPA and the concerns of the local community.
- Investment of this scale secures high value employment that will be crucial in the transition to a net-zero economy in a way that is fair for all.
- The oil and gas sector can and will play a positive role in this transition, helping to channel its resources and innovative supply chain to design the diverse energy system we need for the future.

Plant Background:

- 1. The Fife Ethylene Plant (FEP), owned by ExxonMobil, is co-located with the Fife Natural Gas Liquids plant (FNGL) owned by Shell, at Mossmorran. The FEP uses liquid natural gas feedstock from the North Sea to produce Ethylene. Around half the Ethylene produced is delivered to the UK Ethylene pipe network, with the remainder exported to the Antwerp petrochemical hub for global markets, via the Braefoot Bay Marine Terminal.
- 2. The plant represents a significant employer in the Scottish and Fife economies, employing around 170 employees directly, the majority of which live within six miles of the plant. The plant also engages around 120 companies across Scotland in supplying a range of goods and services to the site.
- 3. Industry figures estimate that current activity at the site is worth approximately £32 million per annum to the local economy.

ANNEX B - Environmental Performance

- Low reliability at the site has resulted in the increased frequency of unplanned outages over the past 2 years, leading to periods of sustained elevated flaring activity over and above that expected as business as usual. SEPA has previously issued final warning letters to both operators in April 2018 in relation to unplanned flaring in June 2017.
- 2. This activity has led to a significant number of complaints by local residents. Local campaigners including residents and councillors are calling for the Scottish Government to commission an independent health and social impacts study on the impacts of flaring at Mossmorran. Mark Ruskell MSP has also called for the closure of the plant as part of a Just Transition away from fossil fuels.
- 3. A prolonged period of flaring in April 2019 led SEPA to initiate a formal regulatory investigation, which will conclude by end November 2019, subject to no new lines of enquiry being uncovered during this phase.
- 4. SEPA confirms air quality monitoring at a number of locations will continue as monitoring reports continues to show no breach of air quality standards. Noise monitoring will also continue.
- 5. The most recent unplanned outage on 13 August, relating to a boiler unit failure and resultant steam loss, has resulted in a temporary cessation of activity. ExxonMobil are using this shutdown period to carry out essential site maintenance. We expect the plant to remain closed until around December 2019 while this work continues.
- 6. In response to these reliability issues, on the 23 August, SEPA served operating permit variations on ExxonMobil Chemical Limited and Shell U.K. Limited to require both operators to achieve 'Best Available Techniques' at Mossmorran in the shortest timeframe possible. The variations are designed to reduce the impacts of flaring on local communities when it is necessary.
- 7. The site at Mossmorran is part of the SEGAL (Shell Esso Gas and Associated Liquids) which separates natural gas liquids from the gas supply and transports downstream processing at Shell FNGL and ExxonMobil FEP. Currently, the operator of SEGAL, Shell, is carrying out remedial action to ensure the system continues to operate within acceptable limits. Discussion with relevant stakeholders including BEIS and National Grid have provided assurance that there are is no significant risk to gas supply and no grounds for concerns regarding impacts on any other essential services (separate advice has been submitted by Resilience Division).
- 8. Engagement on environmental impacts/compliance is being led through the ECCLR Portfolio.

Proposed Investment

- 1. ExxonMobil is developing a significant package of investment to improve reliability and efficiency at the site, with a view to addressing the issues raised by SEPA, and therefore adopt the 'Best Available Techniques'.
- 2. The overall value of the investment package is estimated at £160m, the majority of which is expected to be committed by September 2020. The package includes upgraded flare tips to reduce noise impacts, new generators to improve site efficiency, pipeline upgrades and a new control electronics system.
- 3. In addition, the package will also cover new ground flares or equivalent, to reduce the reliance on elevated flaring, albeit these are expected to be deployed over a longer timescale. The timescale of this investment is subject to dialogue between SEPA and the site operator. This means that elevated flaring will continue to be carried out at the site in the coming years.
- 4. ExxonMobil estimate the overall investment package will support around 850 contractor jobs, with goods and services sourced from around 40 companies across Scotland. Given the reliance on on-site engineering and wider support activity, it is anticipated that a substantial proportion of the investment will be retained in Scotland.
- 5. ExxonMobil has also indicated a willingness to explore the role the site can play in transitioning to a net zero economy. Currently, the site generates a significant quantity of hydrogen as a by-product of production, and are interested in beginning a dialogue with stakeholders about how a more reliable site can work in partnership to reduce emissions beyond the site gates.

BRIEFING FOR MINISTER FOR BUSINESS, FAIR WORK AND SKILLS

What Where When	Meeting with senior staff from ExxonMobil Chemical's Fife Ethylene Plant to discuss their 2018 UK Gender Pay Gap report and other work being done on women in STEM; modern apprenticeships and employment. Rm. T.03, Scottish Parliament Tuesday 5 th November 2019 – 16:00 – 16:45 Tbc
Key Message(s)	 [redacted s.29(1)(a)] [redacted s.38(1)(b)]
Who	[redacted s.38(1)(b)] ExxonMobil Chemical (Fife Ethylene Plant); Jacob McAlister, Director of ExxonMobil Chemical's Fife Ethylene Plant
Why	MACCS 2019/0009167 In April you accepted an invitation from [redacted s.38(1)(b)] of ExxonMobil Chemical to have a meeting to discuss the company's 2018 UK Gender Pay Gap Report and the work being done by the company to sustain and improve on the results in the report.
Supporting official	[redacted s.38(1)(b)] Tel. [redacted s.38(1)(b)]
Media handling	None
Briefing contents	Annex A – Agenda for meeting & Biographies Annex B - Summary Page Annex C - Company Brief - ExxonMobil Corporation & ExxonMobil Chemical Annex D - ExxonMobil's 2018 UK Gender Pay Gap report - Background and Key Findings Annex E - Chemical Sciences sector Annex F - STEM Strategy Annex G - Modern and Graduate Apprenticeships

BRIEFING FOR MINISTER FOR BUSINESS, FAIR WORK AND SKILLS

ANNEX A

Agenda for meeting

16:00-16:45, Room T.03, Parliament

- 1. Introductions
- 2. Exxon Mobil Chemical's 2018 UK Gender Pay Gap report
- 3. Wider work by the Fife Ethylene Plant:
 - Women in STEM
 - Modern Apprenticeship programme
 - Providing skilled employment in Fife region and Scotland
- 4. AOB
- 5. End of meeting

Biographies

Jacob McAlister, Director of ExxonMobil Chemical and Plant Manager of the Fife Ethylene Plant

Jacob has overall responsibility for all activities at the Fife Ethylene Plant, including it's safe and efficient operation, the personal safety of all employees and all external engagement. Jacob has worked with ExxonMobil for over 20 years and has held a number of key operational and business management positions in the United States and Canada. [redacted s.38(1)(b)]

[redacted s.38(1)(b)]

BRIEFING FOR MINISTER FOR BUSINESS, FAIR WORK AND SKILLS

ANNEX B

Summary Page

Purpose

- To have a meeting with [redacted s.38(1)(b)] and Jacob McAlister, Director, of ExxonMobil's Fife Ethylene Plant, Mossmorran, Fife, to discuss the company's 2018 UK Gender Pay Gap report and the work being done by the company to improve on the results in the report.
- To discuss the work being done by the Fife Ethylene Plant to encourage women into STEM; their Modern Apprenticeship programme; and the wider contribution the plant makes to skilled employment in the Fife region and over Scotland, including their supply chain.
- [redacted s.29(1)(a)]

Key issues

- ExxonMobil's **median** gender pay gap for 2018 was **3.9%**, for their UK companies (the **mean** pay gap was **9.1%**). This figure is significantly lower than the UK median national average figure of **17.9%**.
- The UK Median Gender Pay Gap for all employees for chemical and chemical products is **19.3%**.

Possible discussion points

- Congratulate ExxonMobil on their median pay gap (3.9%) being lower than the national median average in Scotland (5.7%) and the UK (8.6%).
- How have they successfully attracted 41% female graduates into their company?
- How are they planning to deliver the objectives of their gender balance action plan?
- Have they analyzed the intersectional make up of recruits i.e. ethnic origin, age, disabilities?
- How have they enhanced their workplace flexibility and parental leave programmes to support women and parents?
- Have they robust pregnancy and maternity polices and support in place? What best practice can they share?

BRIEFING FOR MINISTER FOR BUSINESS, FAIR WORK AND SKILLS

[redacted s.29(1)(a)]

- [redacted s.29(1)(a)]
- [redacted s.29(1)(a)]
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- [redacted s.29(1)(a)]
- [redacted s.29(1)(a)]
- [redacted s.29(1)(a)]
- [redacted s.29(1)(a)]
- [redacted s.29(1)(a)]

BRIEFING FOR MINISTER FOR BUSINESS, FAIR WORK AND SKILLS

ANNEX C

Company Brief – ExxonMobil Corporation & ExxonMobil Chemical

Guiding Principles

ExxonMobil Corporation is committed to being the world's premier petroleum and petrochemical company. To that end, the company must continuously achieve superior financial and operating results while simultaneously adhering to high ethical standards. The following principles guide the company's relationships with their shareholders, customers, employees, and communities:

Shareholders – ExxonMobil are committed to enhancing the long-term value of the investment dollars entrusted to the company by their shareholders;

Customers – ExxonMobil are committed to being innovative and responsive to their customers, while offering high quality products and services at competitive prices;

Employees – the company will strive to hire and retain the most qualified people available and to maximise their opportunities for success through training and development.

Communities – ExxonMobil will maintain high ethical standards, obey all applicable laws, rules, and regulations, and respect local and national cultures in all the places that they operate in worldwide.

Products and Services

Aviation - ExxonMobil Aviation is one of the world's leading suppliers of jet fuel and provides consistently high quality products and services around the globe.

Chemicals - ExxonMobil Chemical is an integrated manufacturer and global marketer of long-chain compounds and materials including olefins, aromatic fluids, synthetic rubber, polythene, polypropylene, oriented polypropylene packaging films and plasticisers.

Esso Fuels – ExxonMobil's petrol and diesel are developed to help a car's engine deliver better performance.

Wholesale Fuels - ExxonMobil is one of the largest suppliers of transport fuels in the UK. It operates the UK's largest refinery at Fawley, near Southampton, which has around 20% of UK refining capacity.

Marine Fuels - ExxonMobil Marine Fuels provides high quality fuels, 24/7 service and technical advice to customers in over 60 countries around the globe.

Lubricants - ExxonMobil is the world's leading manufacturer of both conventional and synthetic finished lubricants.

BRIEFING FOR MINISTER FOR BUSINESS, FAIR WORK AND SKILLS

ExxonMobil Chemical's Fife Ethylene Plant at Mossmorran

- The Fife Ethylene Plant is one of Europe's largest and most modern ethylene facilities. The plant started production in 1985 and is one of only four natural gas-fed steam crackers in Europe. It was the first plant specifically designed to use natural gas liquids from the North Sea as feedstock. Alongside INEOS Grangemouth, it supplies manufacturing in Scotland, the rest of the UK and export markets with ethylene. It has an annual capacity of 830,000 tonnes of ethylene. [redacted s.33(1)(b)]
- In November 2015 INEOS signed an agreement with ExxonMobil Chemical Limited and Shell Chemicals Europe BV to supply ethane from US shale gas from Grangemouth to the Fife Ethylene Plant in Scotland https://www.ineos.com/news/ineos-group/ineos-signs-agreement-with-exxonmobil-chemical-limited-and-shell-chemicals-europe-bv/
- [redacted s.33(1)(b)]
- [redacted s.33(1)(b)]
- [redacted s.33(1)(b)]

ExxonMobil Chemical's other UK operations & facilities

Fawley Chemical Manufacturing Plant - at Fawley in Hampshire, Esso Petroleum Company, Limited and ExxonMobil Chemical Limited operate one of the largest and most complex oil refining and petrochemical manufacturing sites in Europe.

Advanced Elastomer Systems - Advanced Elastomer Systems Limited, an ExxonMobil subsidiary, is one of the world's leading suppliers of thermoplastic elastomers (TPEs). Based at a manufacturing plant in Newport, TPEs manufactured at the site are marketed under the trademark Santoprene.

BRIEFING FOR MINISTER FOR BUSINESS, FAIR WORK AND SKILLS

ANNEX D

ExxonMobil 2018 UK Gender Pay Gap report

Background

- ExxonMobil has two separate UK affiliates to which UK gender pay gap regulations apply - Esso Petroleum Company Ltd and ExxonMobil Chemical Ltd which in total employ around 2,500 people.
- UK Government regulations require ExxonMobil to make separate submissions for each of these affiliates. In order to present a complete picture across all their UK sites, which operate under consistent policies and with common approaches to employee pay, the report focuses on combined figures for "ExxonMobil UK".

Key Findings

- ExxonMobil's median gender pay gap for 2018 was 3.9%, for their UK companies (the mean pay gap was 9.1%). This figure is significantly lower than the UK median national average figure of 17.9%.
- 30% of ExxonMobil's UK female employees were in management positions in 2018, a slight increase on the 29% in 2017, and up from 24% in 2013. Management positions include those in leadership and senior technical positions.
- 21% of ExxonMobil's UK senior managers working in the UK and overseas were female in 2018; an increase from 2017 (18%) and up from 14% five years ago. This is a larger proportion than the share of women in the company's UK workforce overall (17%).
- In 2018, 41% of ExxonMobil's UK graduate recruits were women. This compares with 24% in 2013 and is far higher than the 24% of women STEM graduates nationally.
- During 2018, ExxonMobil established Inclusion and Diversity (I&D) core working groups at all of its main sites, to help identify the company's I&D strategic priorities and drive change across their business.
 - At the company's Fife Ethylene Plant, the local People's Interest Network (PIN) core team oversees a range of I&D groups, including the Personal Development group (which helps employees achieve their full potential at work); the 21st Century Norms group (improving work-life balance and wellbeing); and the Fife WIN (Women's Interest Network).
- ExxonMobil's workplace flexibility and parental leave programmes help employees, both male and female, balance their commitments and interests. Since the company's last report they have enhanced paternity leave and shared parental leave programmes, enabling parents to have more choice in how they share their childcare commitments. In 2019, the company are building on this work and increasing the focus around workplace flexibility.

BRIEFING FOR MINISTER FOR BUSINESS, FAIR WORK AND SKILLS

Gender balance action plan

- ExxonMobil is committed to making continued progress in the following areas:
 - o Recruiting more women at all levels, including graduates and apprentices.
 - Retaining and developing women in early and mid-career stages.
 - o Developing female talent to leadership and senior technical positions.
 - o Enhancing parental leave and workplace flexibility to enable employees to balance work and personal commitments.
 - o Increasing focus on inclusion and diversity to support employees throughout their careers.
 - o Investing in STEM education programmes, including for girls and young women, in communities around their UK sites to build grassroots science and technology capability.

BRIEFING FOR MINISTER FOR BUSINESS, FAIR WORK AND SKILLS

ANNEX E

[redacted s.29(1)(a)]

[redacted s.38(1)(b)

BRIEFING FOR MINISTER FOR BUSINESS, FAIR WORK AND SKILLS

ANNEX F

[redacted s.29(1)(a)]

BRIEFING FOR MINISTER FOR BUSINESS, FAIR WORK AND SKILLS

ANNEX G

[redacted s.29(1)(a)]

Graduate Apprenticeships

- The Graduate Apprenticeships: Early Activity and Progress report was published on 14 August 2019. The report can be found here: http://www.skillsdevelopmentscotland.co.uk/media/45882/ga-report-2019.pdf.
- 921 GA places were taken up during 2018-19, up from 278 in 2017/18.
- The programme will grow considerably within 2019/20 and it will make available more than 1,300 Graduate Apprenticeship places.
- Graduate Apprenticeship numbers are still small and any conclusions drawn from the report need to be made with caution.
- However, Graduate Apprenticeship starts tripled to reach a total of 921 starts in 2018/19, which was accompanied by increased female representation from 17.8% of the starts in 2017-18 to 34.3% in 2018-19.
- Given historic underrepresentation for females in STEM, the growth in representation is encouraging, as 10 out the 12 Graduate Apprenticeship frameworks offered in 2018-19 were in STEM subjects.
- We recognise that there is still work to be done in getting more women into Apprenticeship roles and Skills Development Scotland is working in partnership with a range of organisations to address gender imbalance in Apprenticeships.