

# DRILLSAFE FORUM OPENING

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# ARROW ENERGY

## WHAT DOES SAFETY MEAN TO ME?

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Explosion - Piper Alpha platform in the North Sea

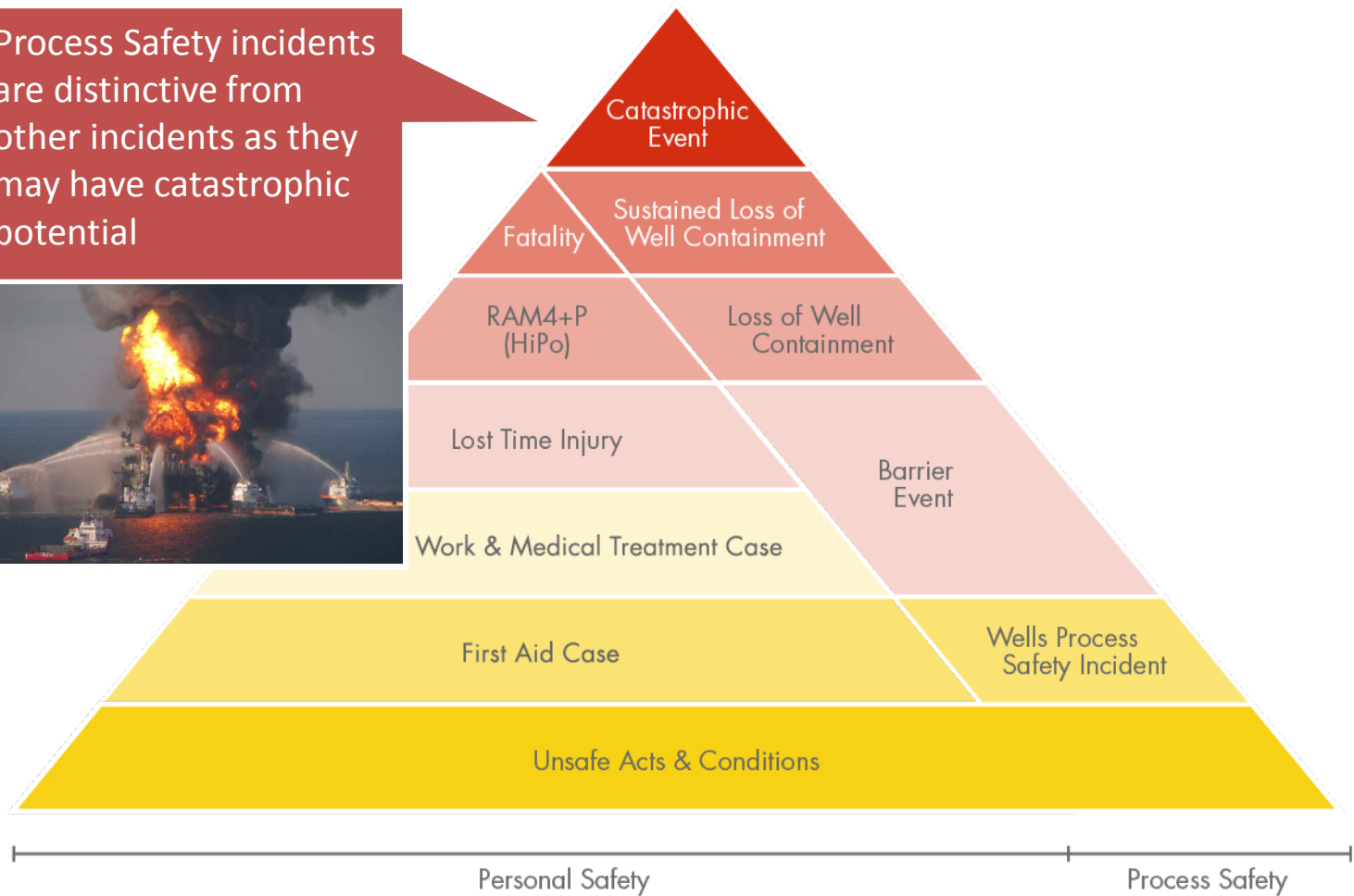


Memorial at Hazlehead Park in Aberdeen

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## PERSONAL AND PROCESS SAFETY

Process Safety incidents are distinctive from other incidents as they may have catastrophic potential



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## Think process safety: the ten ELEMENTS



### **BARRIERS**

Know your physical well barriers and confirm they are tested.



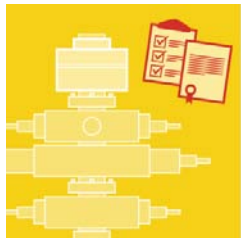
### **LOST BARRIER**

If a barrier is lost, immediately stop and fix it.



### **SUBSURFACE UNCERTAINTIES**

Know and communicate subsurface uncertainties.



### **WELL CONTROL EQUIPMENT**

Know your well control equipment and confirm it's certified and tested.

THESE TEN COVER  
REQUIREMENTS  
CRITICAL TO **WELLS**  
**PROCESS SAFETY**



### **TRAINED PEOPLE**

Confirm all people are trained and competent for the task.



### **STANDARDS & PROCEDURES**

Follow standards and procedures or get approval to deviate.



### **RISK ASSESS**

Perform risk assessments during planning and for changes.



### **WALK THE LINE**

'Walk the line' on temporary rig-ups and confirm set-up = layout drawing.



### **EMERGENCY RESPONSE**

Test your emergency responses and conduct regular drills.



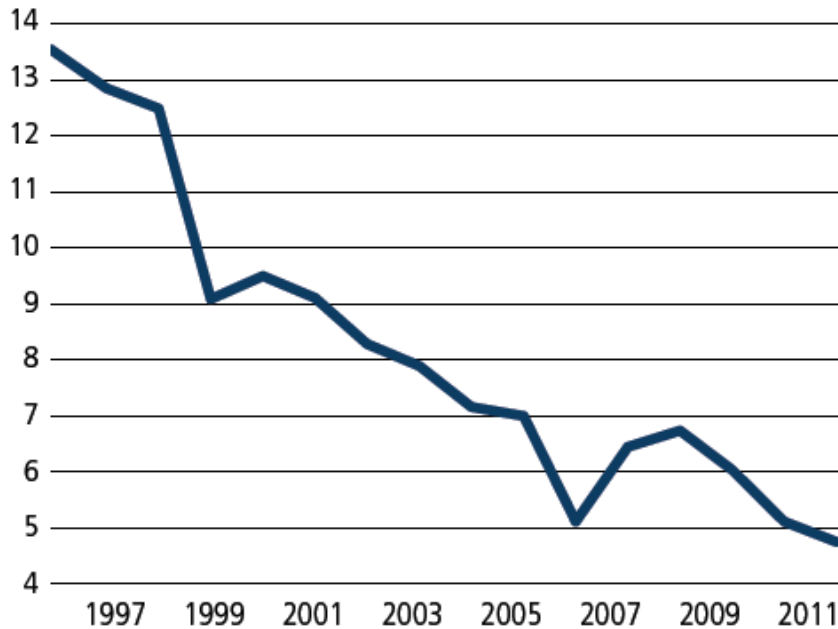
### **REPORT/LEARN**

Report Wells Process Safety incidents – investigate, share, learn.

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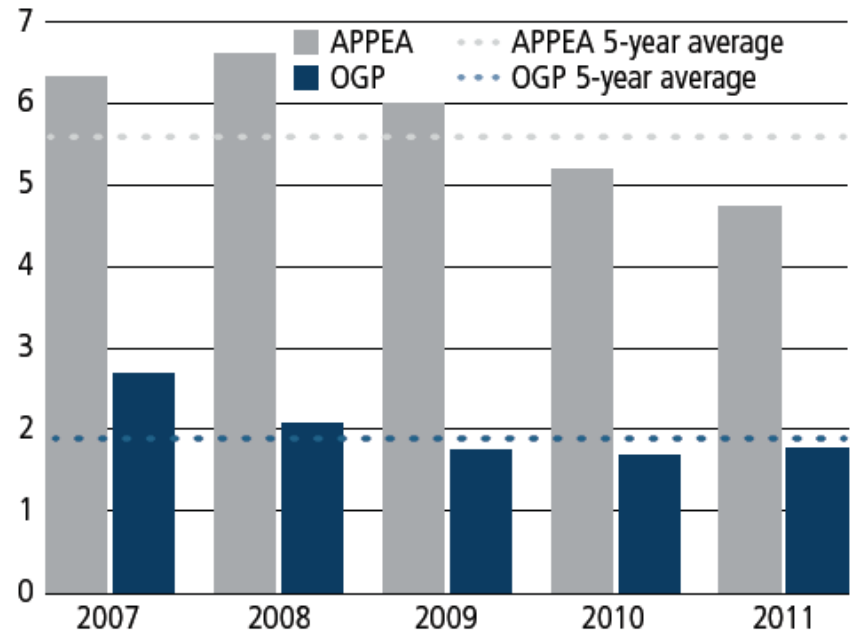
## APPEA SAFETY PERFORMANCE IN CONTEXT

Injury frequency, 1996–2011 (per million hours worked)



Source: APPEA safety performance data

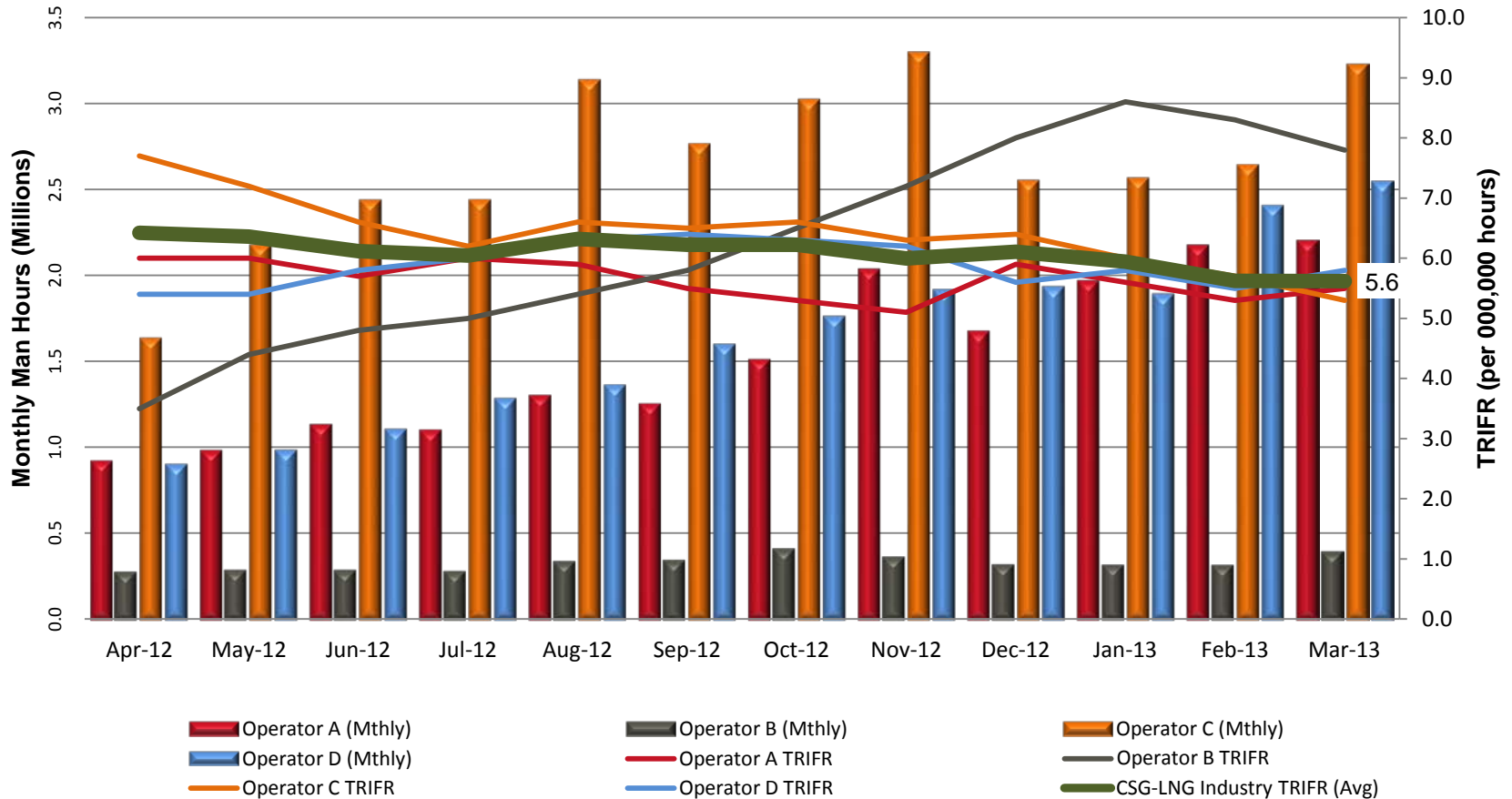
International injury rates, 2007–11 (TRIFR/million hours)



Sources: APPEA and OGP Safety Performance Report 2010–11

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## TRIFR ALL OPERATORS: APRIL '12 TO MARCH '13 PROJECT WIDE



# ARROW ENERGY FAILURE TO LEARN?

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November 2011



September 2012



August 2012



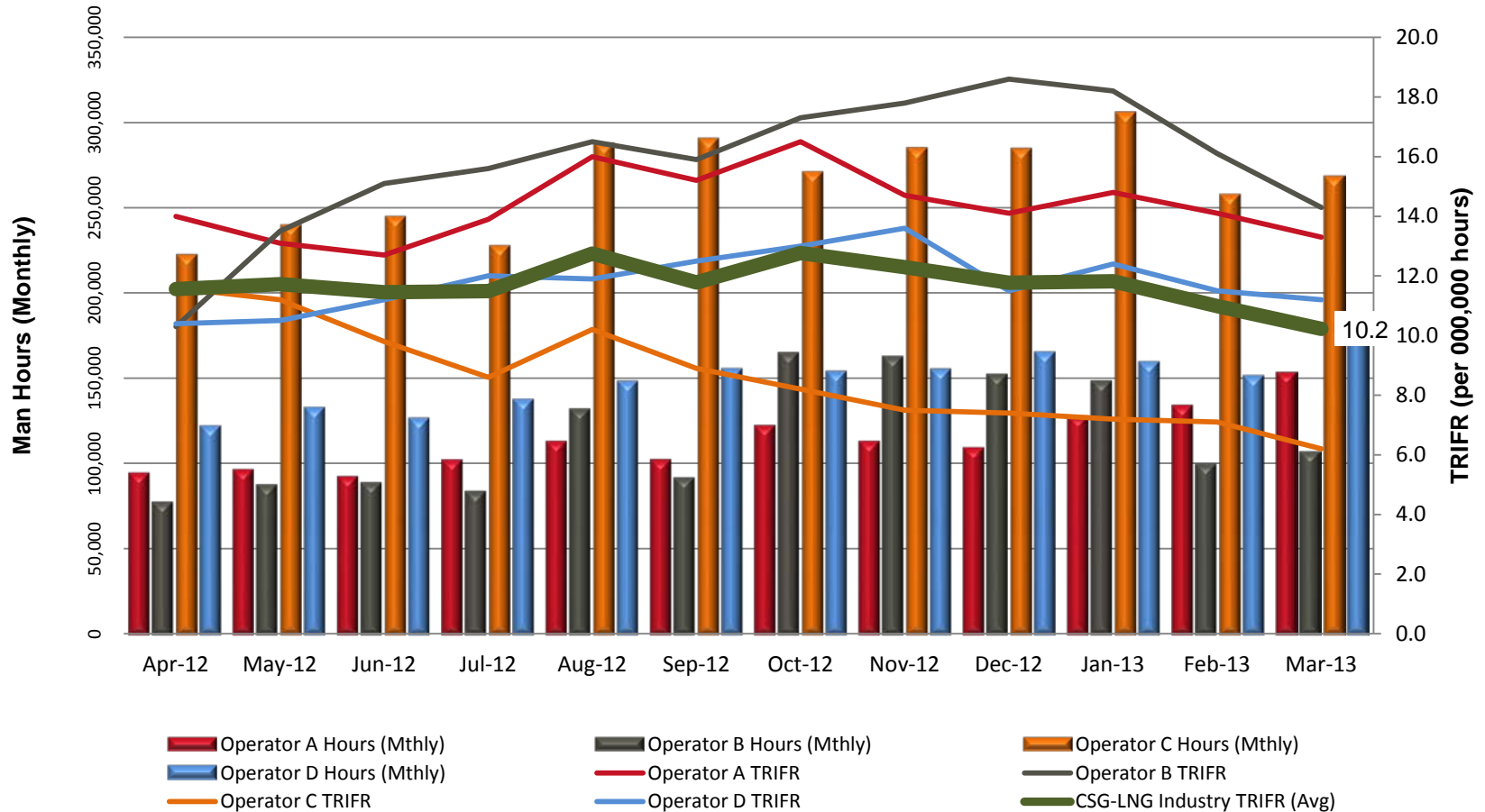
May 2013



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## TRIFR ALL OPERATORS APRIL '12 TO MARCH '13 CSG DRILLING

### CSG project only





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## MIKE'S PLEDGE

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"I will be a Visible Safety Leader and advocate both internally and externally. I accept that I am accountable, and will be judged accordingly, for the safety of my own people, including contractors. I will understand and drive down the risks that can lead to high potential incidents and injuries. I will demonstrate this by:

- I will visit the field operations at least once per month and **will engage with rig and field crews** to understand their safety related issues.
- I will **push back on business plan elements that add significantly to our risk profile** where we are unable to provide good performing contractors and/or competent supervision.
- I will personally and actively support recruitment of competent staff and the **competency development of staff and contractors.**
- I will only allow newly contracted rigs to **start when I am satisfied that they are ready to operate safely.**
- I will **hold my staff and contractor staff accountable** for the safety performance of their operation.
- I will **not accept poor performing contractors or staff** and will support contract termination if improvement is not made.
- I will **verify learning from incidents** through proper identification and closure of improvement actions
- I will encourage the use of innovation in **design and practice to eliminate hazards** and reduce risks.

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## SUMMARY

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- Drilling and completions TRIFR continues to improve across the four CSG projects as well as APPEA as a whole.
- We still have our HiPos: electrical, DROPs and road transport.
- Don't lose sight of process safety - have a process safety KPI.
- Standardise and collaborate.
- Visible safety leadership.
- Operate in a state of chronic unease.



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THANK YOU

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