

# Lower Churchill Project Astaldi Update – Jan 20, 2016

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Boundless Energy



Take a  
**MOMENT**  
for Safety



# Key Messages

- Continuing with Astaldi (Contractor) to Powerhouse Contract completion is preferred
  - Significant internal efforts in project execution, commercial and impact analysis support this
  - Confirmed by external stakeholders (eg. Canada, IE, Westney, etc.)
- Not a “normal” contractor dispute situation given when it has occurred in the cycle of contract completion and the potential financial impact it could have on Contractor’s organization
- Initial offer structured to include components for unit rate production, key milestone achievement and stretch targets
- Detailed discussions between Project Team and Contractor has identified a schedule delay impact of 12-18 month
- Overall incremental cash flow impact to LCP will include above noted payments to Contractor plus (i) cost to carry MF site for delay period, (ii) potential third party claims, and (iii) bond interest/sinking fund payments that would have been recovered through PPA under original schedule
- Implications for NL pre-funded equity requirements under the Project Finance Agreements and Federal Loan Guarantee

# Background

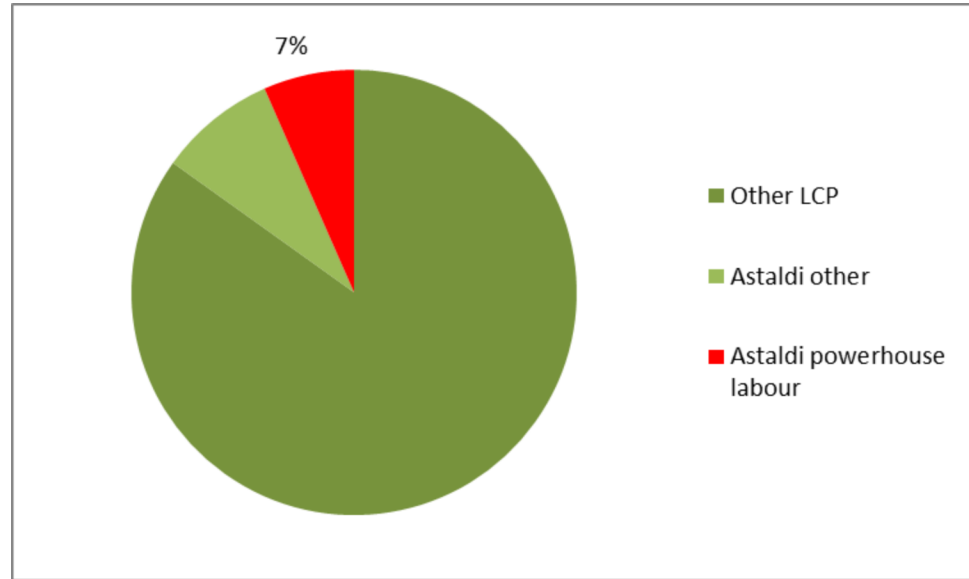
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# Astaldi in Context

Lower Churchill Project	
Component	Amount (\$M)
Transmission line	2,160
DC specialties	1,156
<b>MF Generation</b>	<b>3,068</b>
Other	1,082
Contingency	187
<b>Total</b>	<b>7,653</b>

MF Generation	
MF Component	Amount (\$M)
Infrastructure and Services	550
Electrical/ Mechanical & Hydro-Mechanical	622
Civil works	739
<b>Astaldi Scope</b>	<b>1,157</b>
<b>Total</b>	<b>3,068</b>

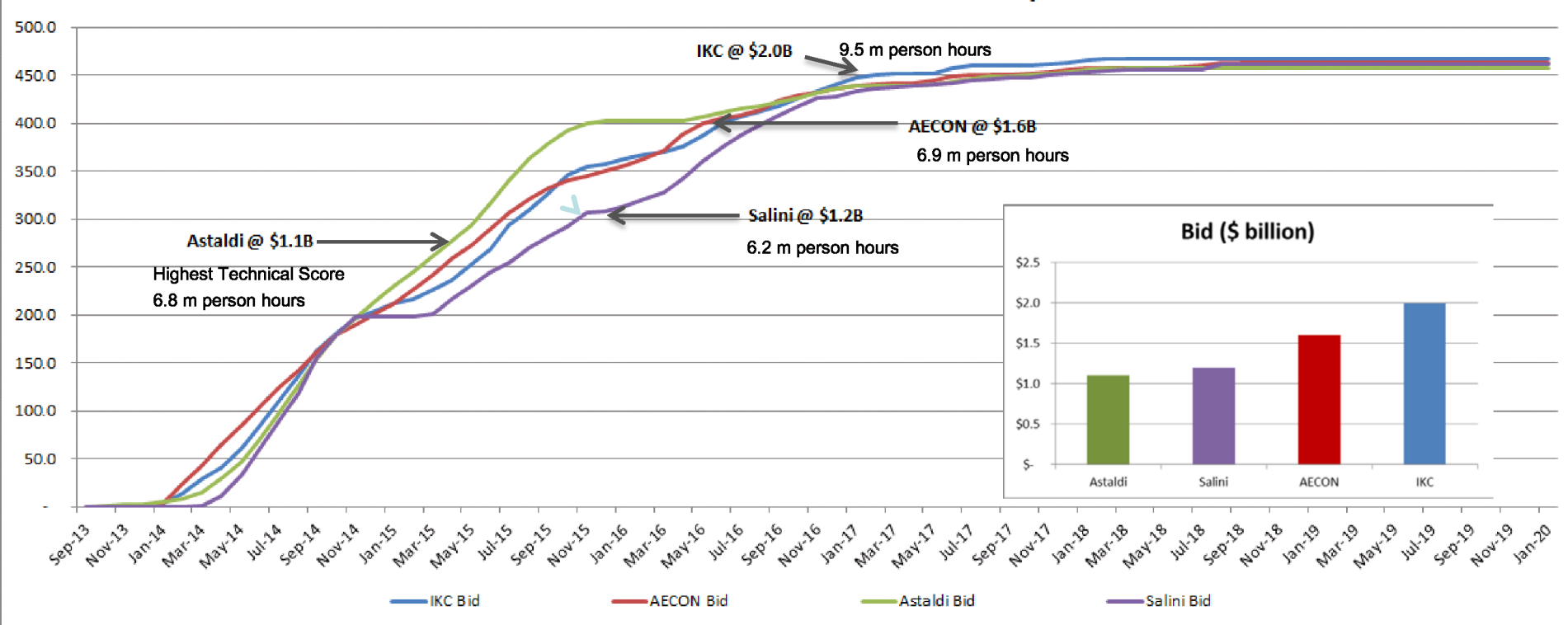
Astaldi Scope	
Astaldi Component	Amount (\$M)
Mob/Demob. and Infrastructure	233
Powerhouse Unit rated items (Fixed price)	201
<b>Powerhouse Labour</b>	<b>504</b>
Spillway and transition dams	219
<b>Total</b>	<b>1,157</b>

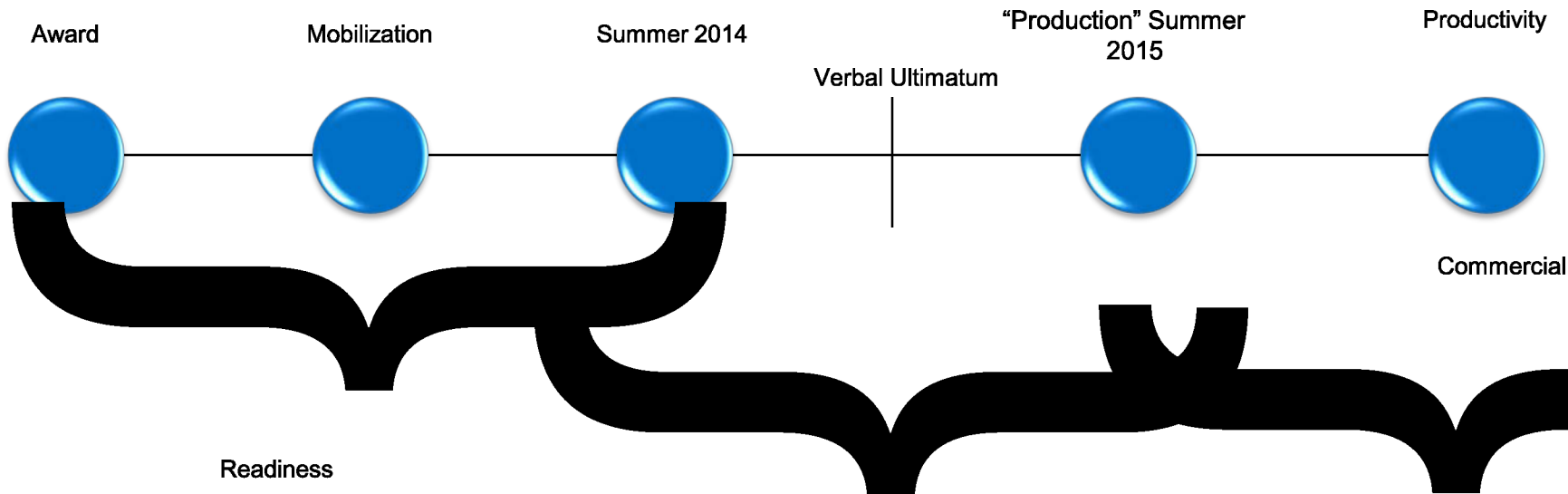
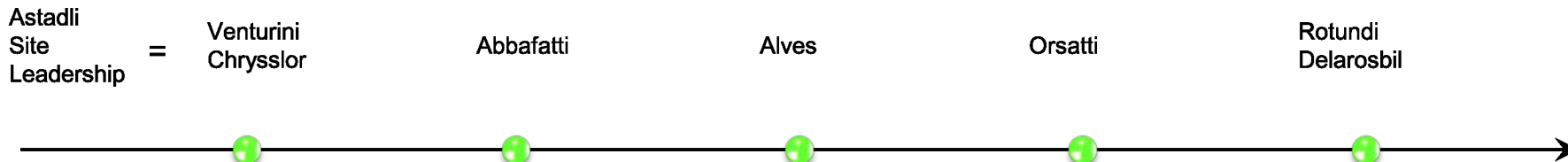


# Benchmarking Astaldi with Competition

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**CH0007 Cumulative Production Curves Comparison**





- Initiatives**
- Leadership
  - Planning/Extensions
  - Labour

- Focus Areas**
1. Executives
  2. Commercial – Astaldi
  3. Project Overall



# Preparations and Analysis

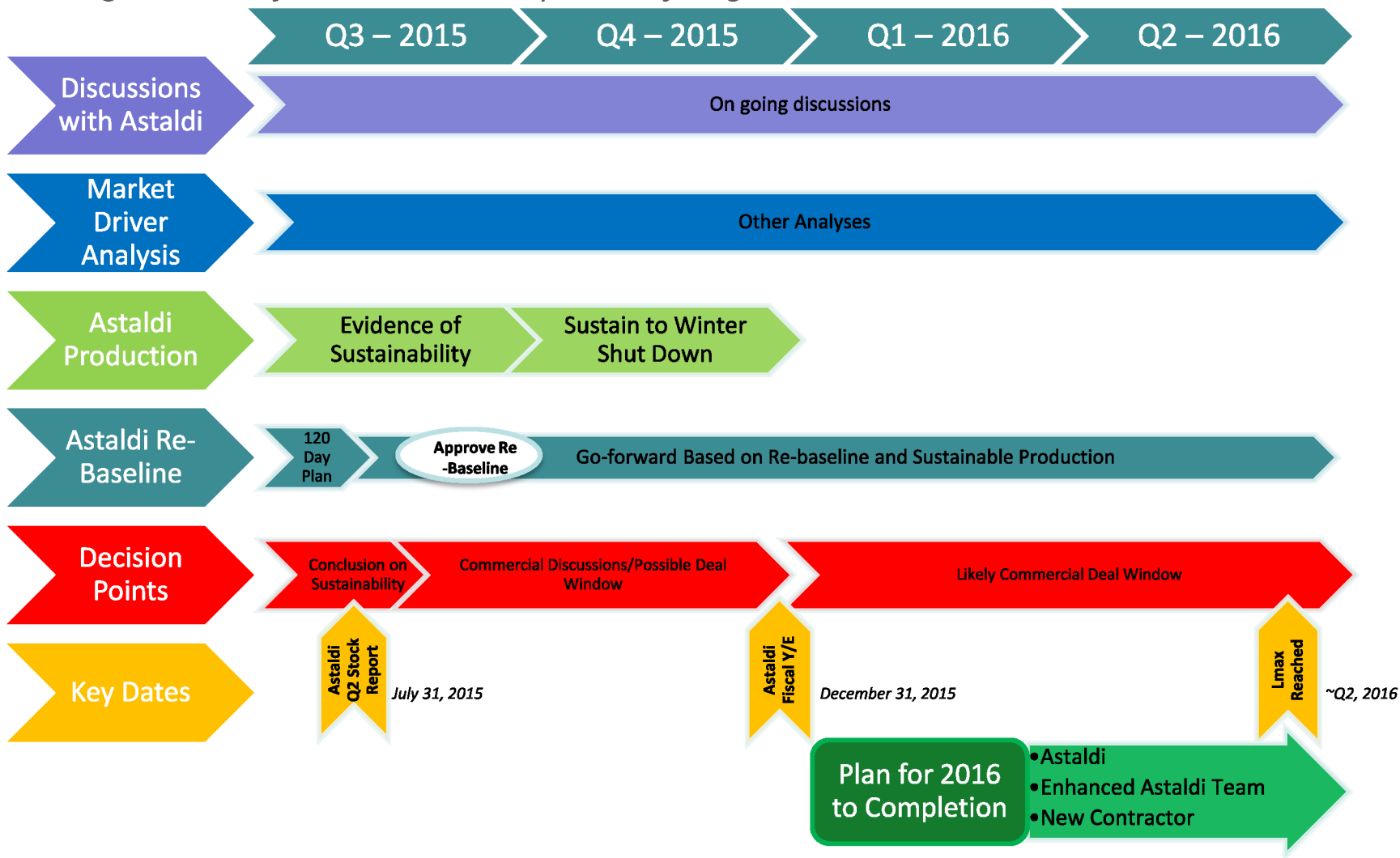
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- **Focus Area 1**
  - Ensure steps are being taken to maximize and sustain Astaldi production
- **Focus Area 2**
  - Commercial Discussions
  - Key targets and decision timelines
  - Cost and cash curves of all scenarios – bid rates, expected production rates, etc.
  - Time curves of all scenarios
- **Focus Area 3**
  - Internal Investment Evaluation and external financial advisors assessing financial impact on both the Project and Contractor
  - Includes the value of time to Nalcor and potential offsets (eg. Recall power via LIL pre-MF commissioning)



# Proactive Contingency Planning (Concept Schedule for 2015/2016)

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# Production Status

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# Muskrat Falls Site





# Spillway Progress

## November 2014

The spillway concrete works were at the stage when the base slabs were poured and the concrete piers were being started



## November 2015

The spillway concrete works, transition dams and separation wall are complete. Astaldi have handed over to Andritz for the installation of the guides and gates



# Separation Wall

**November 2014**

The separation wall had not been started



**November 2015**

The separation wall is complete

# Centre Transition Dam

## November 2014

The centre transition dam base slab was poured and formwork was being erected



## November 2015

The centre transition dam is complete

# Powerhouse and Intakes

## November 2014

The powerhouse and intake concrete works were just started Unit 1 and 2



## November 2015

The powerhouse and intake base slabs are poured, the scroll case formwork is erected and concrete works proceeding on all units



# North Spur

## November 2014

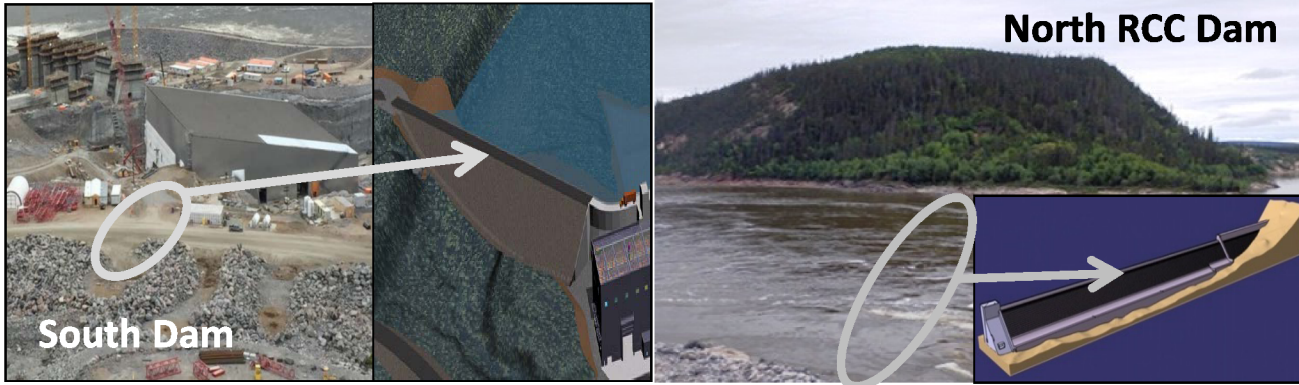
The North Spur stabilization contract not yet awarded and no work had started on stabilization



## November 2015

The contract was awarded Q2 2015. The contractor has made good progress with the upstream cut-off wall complete and upstream slope stabilization well advanced; downstream slope stabilization is also well advanced

# North and South Dams



**North RCC Dam**

**November 2014**  
 The basic design was complete. Contracts were out for bid but not awarded



**November 2015**

The contract for north and south dams was awarded Q3 2015, the cofferdam that will close and divert the river in 2016 has started and the cofferdam to protect the powerhouse intakes is also well advanced



# Execution Options

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# CH0007 Execution Options Confidential and Privileged in Contemplation of litigation

	Terminate for Cause	Abandonment	Deal with Astaldi
Time	21-27 Months	21-27 Months	12-24 Months
Value	<ul style="list-style-type: none"> <li>• \$280-320 M</li> <li>• 2-4 Bond Payments @ \$150 M Each</li> <li>• Rev\$</li> <li>• \$50-70 M</li> <li>• \$325-\$800 M +</li> <li>• Medium</li> </ul>	<ul style="list-style-type: none"> <li>• \$280-320 M+</li> <li>• 2-4 Bond Payments @ \$150 M Each</li> <li>• Rev\$</li> <li>• \$50-70 M</li> <li>• \$250-\$575 M +</li> <li>• Medium/Low</li> </ul>	<ul style="list-style-type: none"> <li>• \$150-300 M</li> <li>• 2-4 Bond Payments @ \$150 M Each</li> <li>• Rev\$</li> <li>• \$30-60 M</li> <li>• \$250 M - ????</li> <li>• Current Contract</li> </ul>
Carrying Costs IDC			
Rev. & Opp. 3 <sup>rd</sup> Party Direct Scope Completion Liability Exposure			

# Execution Options with Remaining CH0007 Scope

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## With Astaldi- No Deal (High Level of Uncertainty)

- High risk of 36+ months delay
- Astaldi use confrontational go slow approach
- Increase risk of quality and safety concerns
- Default risk with Canada
- Dispute process engaged quickly
- Further Claims highly likely in the future
- Risk of cumulative issue creation to increase compensation
- Interface risks with other contractors increases
- Continued risk of Astaldi corporate failure
- Risk of future switch out increases

# Commercial

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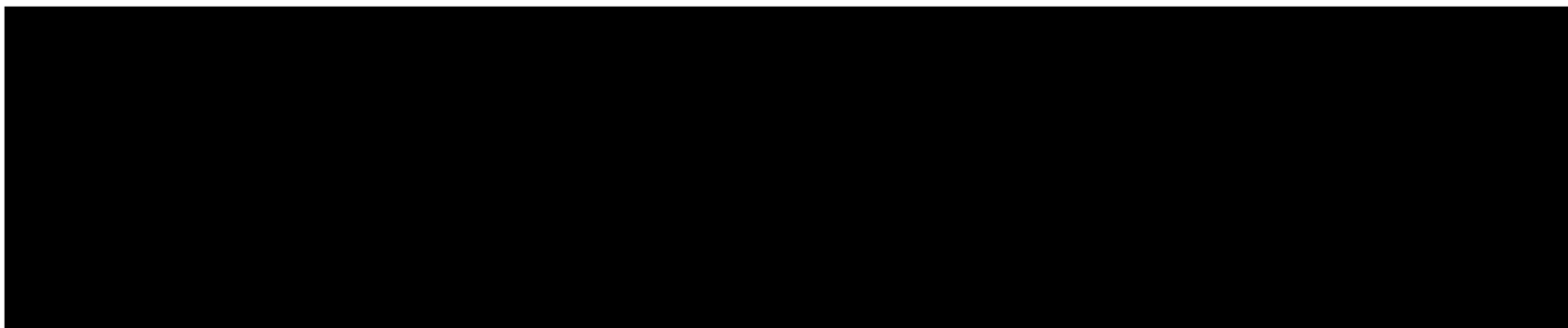
# Next Steps – Commercial Strategy/Approach

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- We cannot let next summer be used as a Lever



- Efficiency, efficiency, efficiency emphasis- productivity



- Interim Approach - We talk in annual cash flows with money tied to 2016, 2017 and 2018



Sharing our ideas in an open and supportive manner to achieve excellence.

# Teamwork

# Open Communication

Fostering an environment where information moves freely in a timely manner.

# Honesty and Trust

Being sincere in everything we say and do.

Relentless commitment to protecting ourselves, our colleagues, and our community.

# Safety

# Respect and Dignity

Appreciating the individuality of others by our words and actions.

# Leadership

Empowering individuals to help, guide and inspire others.

Holding ourselves responsible for our actions and performance.

# Accountability

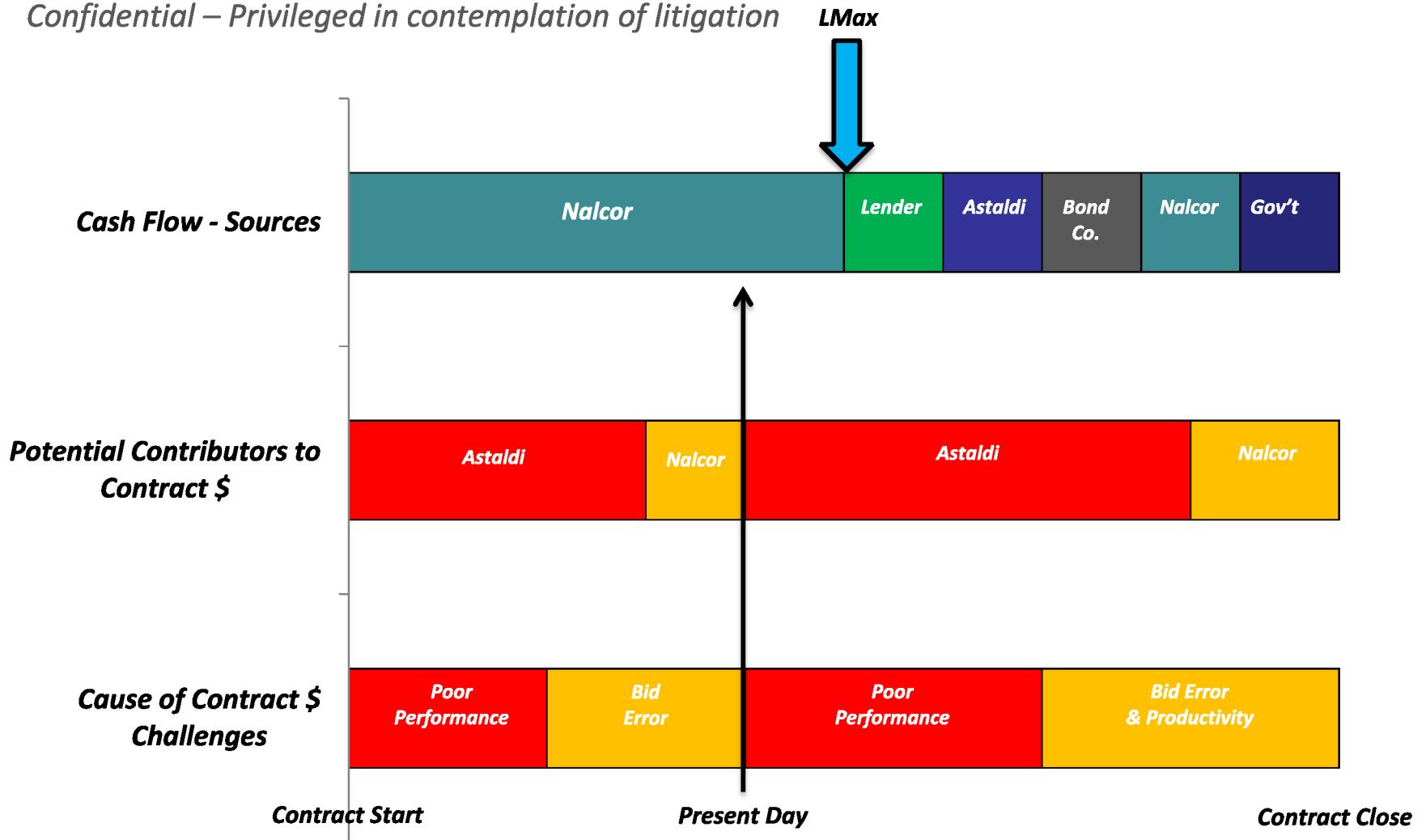
# Commercial – Principles (Nalcor)

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- Must continue to work diligently - Threats to stop = default
- Must perform as good as another contractor
- Must continue to work on efficiency (Realistic Plan)
- Must achieve acceptable Quality
- Astaldi must take exposure equivalent to at least our value of time
- Astaldi must take exposure that equals at least their security (Not PG)
- We will not be exposed to any losses last year for poor performance
- Will not give up our strong contract position
- Must get something physical for any additional investment
- Must have full waiver of claims

# Astaldi Contract – Cause vs Cash

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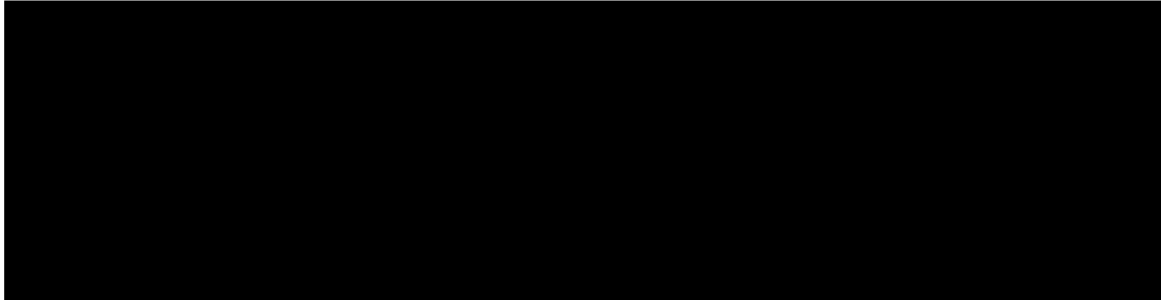
# Astaldi Discussions Since June 16

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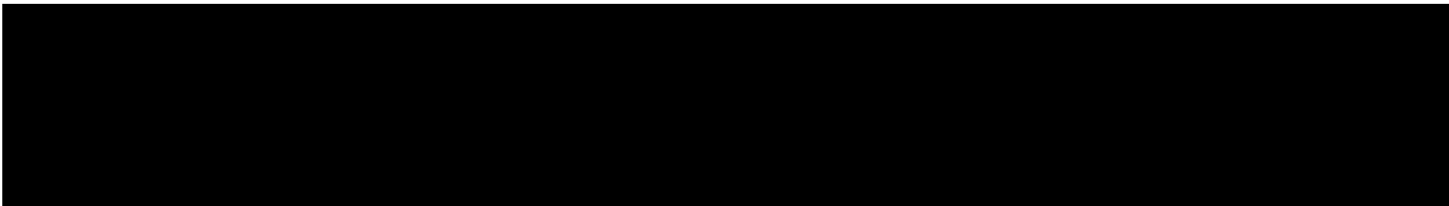
- Continued emphasis on Project delivery
- Rebaseline efforts well under way –
  - Optimization discussions will be required
- Sustainability of production against rebaseline reinforced as a must
- CEO MOM signed
- Road Map document completed for July 31<sup>st</sup>
- Clawback of the advance payment deferred temporarily
- Meeting held on process
- Principles shared
- Schedule and cost meeting held where initial economic gap presented

# Other Developments Since June 16

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- Site visit occurred – Pete Oppenheim – Retired US Army Corp of Engineers, Richard Tucker – University of Texas (Founder of CII, reknowned productivity expert), Richard Harding – Retired President of Bechtel Construction



- Investment Evaluation analysis input
- Ibb's report submitted