SINGARENI COLLIERIES COMPANY LIMITED

Mining Customer Profile - India

September 2017

COMPANY BACKGROUND

The Singareni Collieries Company Limited (SCCL) is a Public Sector coal mining company jointly owned by the State Government of Telangana and the Government of India on a 51:49 equity basis. SCCL coal reserves stretch across 350 km of the Pranahita – Godavari Valley of Telangana with proven geological reserves of about 8791 million tonnes. SCCL is currently operating 17 opencast and 30 underground mines in four districts of Telangana with a team of approximately 58,800. In the 2016 financial year SCCL achieved AUD 3.3 billion turnover.

Website: www.scclmines.com
MAJOR OPERATING DIVISIONS

SCCL coal mining operates in eleven areas. Each area is led by a general manager and procurement is centralised within SCCL through an e-procurement tender process.

The Singareni Collieries Company Limited eProcurement Portal

SCCL has chartered an aggressive growth strategy to leverage its core competency in coal mining operations to establish a mining consultancy. The focal areas include; coal exploration and evaluation; mine planning, design and construction; mine survey; environmental management and mines rescue services.

As part of SCCL’s diversification strategy the company has established two thermal power units, at Singareni Thermal Power Plant (STPP) in Mancherial District of Telangana State, totaling 1,200 MW (2 x 600 MW). The third unit of 800MW is proposed as a part of STPP expansion.

MINING ACTIVITIES

SCCL is currently operating 17 opencast and 30 underground mines

<table>
<thead>
<tr>
<th>2015-2016 Overall Production</th>
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<tbody>
<tr>
<td>Coal Production (Mill.Tons)</td>
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<td>Coal Despatches (Mill.Tons)</td>
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Surface Miner Technology was introduced for the first time in 2002. Other initiatives include; continuous miner (2006), diesel operated UG machinery (2008), high wall mining (2010) and high capacity longwall (2014).

- **Highwall mining:** Started in January 2011 to extract the residual coal in the final high wall of opencast mines.
- **High capacity Longwall (2.81 MTPA):** Production from Longwall technology in Adityala Shaft Project commenced from October 2014.

Mechanization of underground mining has seen the commissioning of 104 Side Discharge Loaders and 37 Load Haul Dumpers that have enhanced safety and productivity during the last four years. Other innovations in underground mines include the introduction of thirty-five man-riding systems (chairlift and railcar) that have improved transportation inside the mines.

SCCL have harnessed the benefits of IT by developing proprietary software for integrated Open-cast and underground mine management systems.

SCCL has introduced cost cap over the life of the equipment for 100T dumpers, 60T dumpers and dozers to ensure the HEMM availability at 85%. The company is also proposing to introduce steep gradient coal conveyors in open cast projects.


## PROCUREMENT PRIORITIES

### Key drivers across all mines

In the context of maintaining SCCL’s overarching objectives of maximising production while maintaining its position as a low cost producer, key operational drivers focus on safety; increased machine utilisation; coal quality and environmental compliance.

### Operational Imperatives

<table>
<thead>
<tr>
<th><strong>Open Pit Mines</strong></th>
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<tbody>
<tr>
<td><strong>Productivity</strong></td>
<td>A key focus for the Singareni management is to educate the coal mines to increase the coal production through greater asset utilisation. In three shifts, the shovels were functioning for an average of 10 to 12 hours per day against the stipulated norms of 20 hours per day.</td>
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<tr>
<td><strong>Safety</strong></td>
<td>Collision avoidance, integrated mine planning, slope stability alarm systems, proximity detection systems</td>
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<tr>
<td><strong>Quality</strong></td>
<td>On belt coal quality scanners, washery components, in-motion weighing systems</td>
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<tr>
<td><strong>Environmental compliance</strong></td>
<td>Dewatering pumps, slurry beneficiation, dry coal washing, rehabilitation</td>
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<tr>
<td><strong>Land acquisition &amp; rehabilitation</strong></td>
<td>Population pressures make land acquisition difficult and where achieved, the existing population have to be resettled in a built township</td>
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<table>
<thead>
<tr>
<th><strong>Underground Mines</strong></th>
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<tbody>
<tr>
<td><strong>Productivity</strong></td>
<td>Mining technologies to access geologically challenging reserves. To improve productivity by better utilisation of existing assets. Current Machine usage is very low. Side Dump Loaders (SDL) and Load Header Dumpers (LHD) are currently functioning only eight to nine hours per day. Management have set minimum targets to fourteen hours a day and production at 150 tonnes per day by SDL and 250 tonnes per day by LHD.</td>
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<tr>
<td><strong>Safety</strong></td>
<td>Slope stability, mine ventilation, air-conditioning for deep underground, fire and heat detection. Training, skill development, risk assessment.</td>
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<tr>
<td><strong>Quality</strong></td>
<td>Washery components</td>
</tr>
<tr>
<td><strong>Environmental compliance</strong></td>
<td>Clean coal technologies, water seepage issues, rehabilitation</td>
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PROCUREMENT OPPORTUNITIES

Australian METS suppliers have an opportunity to meet SCCL’s operational challenges in areas of higher technology where SCCL are looking offshore for operational solutions.

Areas of interest to SCCL include:

- Technologies for exploitation of steep seams and thick seams
- Adaptation of advanced technologies for extraction of huge coal reserves locked-up in developed / standing pillars
- Design, development and transfer of technology for high capacity longwall faces
- Design, development and transfer of technology for high production in geologically disturbed coal deposits
- Strata management tools, including slope stability
- Clean coal technologies – washing, CBM, CTL, hydraulic mining, advanced dry coal cleaning technologies etc
- Air Conditioning systems and spot coolers for deep underground mines
- High capacity mine mechanical ventilators
- Early fire / spontaneous heating detection and prevention systems.
- Predict impending roof fall in underground mines
- Effective communication system to locate trapped miners in emergencies like major roof falls, inundation, fire, gas irruption etc
- Assess hidden slips / discontinuity in the roof / sides
  - Slope stability monitoring technology - advance warning system for dump and slope failures
  - High capacity Heavy Earth Moving Machinery (HEMM) - Shovel : 25 cubic meter bucket capacity, dumper : 190 T
- Collision avoidance safety system for heavy transport vehicles
- Integrated mine planning for large, deep and steep open-cast mines
- Coal crushing and screening machinery
- Directional drilling techniques
- Risk assessment and mitigation plans
- Training and skill development – operators, middle management, senior management (in view of their plans to implement state-of-the-art technologies)

NB: for most underground equipment in India, DGMS regulatory clearance is required which can be a lengthy and complex process. [www.dgms.gov.in](http://www.dgms.gov.in)

Procurement Process - Given that SCCL is a government corporation, procurement is primarily through tendering process. However, in special cases regarding unique technologies or challenging projects scenarios, SCCL could consider nomination (or direct award of project) for certain jobs, with due approvals from the Board. Initially, it would be a demonstration and later an expanded scale of operations.

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Local Presence - Establishing a local presence through partnering with established Indian companies or engaging dedicated representation directly has been highly regarded in the procurement decision process. A local presence delivers the ability for regular engagement and ongoing follow-up at a minimum. Where service and/or training are critical aspects of the supply, local presence would be considered essential. Service, repair and maintenance capability is mandatory for non-standard and sophisticated plant and equipment.

CURRENT AUSTRALIAN SUPPLIER ENGAGEMENT

Australian METS suppliers have successfully engaged with SCCL to provide products and services in areas related to safety, training, weighment solutions, waste management and contract mining. Companies could also explore empanelment by presenting relevant experience and expertise, on a need basis.
AUSTRADE

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- strengthen Australia’s tourism industry
- seek consular and passport services.
- international business opportunities.

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