THE INSTITUTE OF ELECTRICAL/ELECTRONICS ENGINEERS
AND
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
National Capital Land Transportation Committee
Invite You To Our Monthly Luncheon Meeting
Tuesday January 8, 2008, 11:30 am

Speaker: Dinesh K. Bansal
Chief Electrical Engineer, Ret.
Indian Railways

Topic: Indian Railways—a turn around story

Place: American Public Transportation Association
Conference Room - 11th Floor
1666 K Street, NW, Washington, DC
Red Line: Farragut North (K Street Exit)
Orange/Blue Lines: Farragut West (17th Street Exit)

Date/Time Tuesday, January 8, 2008, 11:30 am
Lunch: $15 cash at the door.

Reservations: Ken Briers ken.briers@parsons.com 202-775-3397
Karl Berger karl.berger@dcm-va.com 703-803-7917
(Reservations by 4:00 PM Friday January 4)

ABOUT THE SPEAKER:
The author is a retired Chief Electrical Engineer (IR) and a graduate in electrical engineering from the Indian Institute of Technology. He has four decades of experience in research, manufacturing and management on railway systems in India and Internationally. He is a published author and has presented numerous technical papers at international seminars on simulation of electrical power systems to optimize energy bills and overpowering of trains to increase throughput on existing networks.

ABOUT THE TOPIC:
Indian Railways (IR) manage a 40,000 miles network that is the backbone of the nation’s transportation system. After years of operating losses, IR is now a spectacular turnaround story with a surplus of five billion USD in 2007. Revenues are projected to grow steadily with passenger and freight traffic growing at a healthy fifteen and seventeen percent respectively.

Learn about the Indian Railways and get an inside look into the strategy adopted to turn around this gigantic state enterprise. Future plans include building a dedicated heavy haul freight corridor to carry bulk materials from resource rich east to the industrial belt in northern states; utilization of double stack containers to haul finished products from the north to ports on the western coast. New investments worth seven billion USD are planned over the next five years.

भारतीय रेल, Indian Railways

<table>
<thead>
<tr>
<th>Route Miles</th>
<th>63,140km (39,233 mi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locomotives</td>
<td>7,739</td>
</tr>
<tr>
<td>Freight cars</td>
<td>216,717</td>
</tr>
<tr>
<td>Coaches</td>
<td>7,739</td>
</tr>
<tr>
<td>Trains: freight</td>
<td>5,742 / day</td>
</tr>
<tr>
<td>Trains: passenger</td>
<td>8,702 / day</td>
</tr>
<tr>
<td>Passenger volume</td>
<td>15 million / day</td>
</tr>
<tr>
<td>Zones</td>
<td>17 + Calcutta Metro</td>
</tr>
<tr>
<td>Stations</td>
<td>6,853</td>
</tr>
<tr>
<td>Yards</td>
<td>300</td>
</tr>
<tr>
<td>Employment</td>
<td>1.54 million</td>
</tr>
</tbody>
</table>
SPECIAL NOTES:

- Membership in the ASME or IEEE is not required. There are no dues.
- Guests are always welcome; bring an associate!
- Tell us of other associates to be placed on the meeting announcement list! Give us their names and e-mail addresses.
- We are always looking for programmatic development; your suggestions please!

IEEE/ASME National Capital Land Transportation Committee

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