

ATTOCK REFINERY LIMITED

NEWSLETTER PIONEERS

In Petroleum Refining



Jan - Jun 2025



RECOMMENDED READS

COMPANY EVENTS

REWARDS & RECOGNITION

TRAINING & DEVELOPMENT

SOCIAL RESPONSIVENESS

EMPLOYEES AFFAIRS

CREATIVITY CORNER



PATRON-IN-CHIEF



Mr. M. Adil Khattak
Chief Executive Officer

PATRON



Mr. Nadeem Nazir
HOD (HR & Admin)

EDITOR



Ms. Saba Sarfraz
HR & Admin

EDITORIAL TEAM MEMBER



Mr. Salman A. Sheikh
N.C.P.C.



Mr. Kamran Shahzad
HR & Admin



Mr. Muhammad Ahmed
HR & Admin

Departmental Coordinators for Newsletter

- | | |
|--|----------------------|
| 1. Operations | Mr. Viqar Ul Hassan |
| 2. Maintenance | Mr. Waqas Yaqoob |
| 3. Engineering | Mr. Muhammad Qasim |
| 4. Technical Services and P&D | Mr. Saleem Hasrat |
| 5. Human Resources & Administration | Ms. Zainab Shahid |
| 6. Commercial & Materials Management | Mr. Mohsin Ali Sadiq |
| 7. Finance & Corporate Affairs | Mr. Amin Kahoot |
| 8. Business Review & Assurance | Mr. Nek Akhtar |
| 9. Health, Safety, Environment & Quality | Mr. Muhammad Arshad |

Editorial Note

Dear Readers!

The Editorial Board is once again at work and pleased to unveil this edition of Pioneers.

In this edition, life at ARL has been covered from January to June 2025 for the segments of Company Events, Rewards & Recognition, Training and Development, Social Responsiveness, Employees Affairs and Creativity Corner.

You are welcome to share your feedback at newsletter@arl.com.pk

Enjoy Reading!

Events

ARL 4th Plant Maintenance & Operation Conference –ARMOC-2025

The 4th Plant Maintenance & Operation Conference –ARMOC-2025 was organized by Attock Refinery Limited (ARL) on April 16, 2025 at Rawalpindi. Imminent speakers and participants from widely diverse fields attended this prestigious event. The aim of this Conference was to provide an opportunity and a forum to multidimensional stakeholders, both in public and private sectors, to share their challenges and endeavors in the field of Plant Maintenance, Operations, Project, Inspection and Planning, focusing on Oil & Gas, Petrochemical Industry and allied sectors.

The conference meant to contribute to learning from common experiences, gain valuable knowledge of indigenous solutions, better working relationship between different industries, local resources availability, gap identification, benchmarking with best maintenance & operations strategies and gaining updates on the latest plant management solutions. It was also a manifestation of the growing awareness and realization of the importance of Plant Maintenance & Operations in the Petrochemical sector.



Meena Bazaar 2025

ASF's Annual Meena Bazar was organized at ARL Cricket Ground on April 12, 2025. Ms. Riffat Abbasi, Member of Provincial Assembly and Focal Person to the Chief Minister of Punjab, graced the occasion as the Chief Guest. Various NPOs, Companies and Banks set up their stalls. In addition, stalls for food, handicraft, garments and jewelry remained the main attraction for families visiting the event.



ASF Annual Female Sports 2025

Annual Female Sports were organized by Attock Sahara Foundation (ASF) from May 05, 2025 to May 13, 2025 at Elliot Club. In which more than 100 females from Govt. Girls High School (ARL) Nai Abadi, Govt. Girls Higher Secondary School (AOC) Morgah, Workers Welfare Girls School, F.G Public Secondary School Morgah and Government Secondary School of Special Education participated in different games. Table Tennis (Single, Double), Badminton (Single, Double), Volley Ball, Basket Ball, Tug of War, Races (100 meter, 200 meter & Relay Race) and Achery were organized.



76th. Annual Flower Show

The 76th Annual Flower Show was held at Morgah Club on April 16, 2025, in which from Attock Group of Companies participants competed in various floral categories and prizes were distributed amongst the winners.



Events

Safety Week 2025

Attock Refinery Limited (ARL) observed its Annual Safety Week on April 28, 2025, marking a significant milestone over two decades of dedicated Safety Week observance. This year's celebrations were aligned with the International Labour Organization's (ILO) World Day for Safety and Health at Work.



Refineries Award 2024



For second year in a row, Wafi Energy Pakistan Limited under license from Shell International, on March, 2025 has recognized and awarded Attock Refinery Limited (ARL) as the best performer amongst all the local refineries in Pakistan for the year 2024.



Climate Resilience Runner - Up Award-2025



ARL has been honored as runner up in the category of Climate Resilience Award at the 1st Climate Excellence Awards 2025 presented in 3rd Pakistan Climate Conference organized by OICCI in Jan, 2025. This recognition reflects ARL's continued commitment towards a sustainable future.

World Environment Day

Attock Refinery Limited (ARL), in collaboration with the National Cleaner Production Centre (NCPC) and Environment Protection Department (EPD), celebrated World Environment Day on June 5, 2025. The event featured a plantation activity aimed at raising awareness about environmental protection and sustainability. Participants emphasized the importance of collective efforts to create a cleaner and greener future. A walk followed by speeches, by the environmental experts/guests at Morgah Biodiversity Park was part of the event.



Events

19th. Elliot Club Flower Show

Attock Refinery Limited (ARL) organized 19th Elliott Club Annual Flower Show on April 22, 2025, with enthusiastic participation from Non-Management and Junior Management staff. Winners of the garden competition were awarded shields and cash prizes.



World Biodiversity Day

Attock Refinery Limited (ARL), in collaboration with National Cleaner Production Centre (NCPC) and Environment Protection Department (EPD), celebrated World Biodiversity Day on May 22, 2025. Participants explored native flora and learned about the vital role of plant diversity in ecosystem. This initiative emphasized ARL's commitment towards preserving biodiversity which fostered environmental awareness among youth.



Hajj Farewell Party- 2025

Hajj farewell party was held on May 2, 2025 at Elliott Club. Mr. Arshad Hayee Khan, AGM (PO-I), Operations Department was the Chief Guest on the occasion. The function was attended by Departmental Heads and CBA members. A total number of three (3) nominees performed Hajj on Company expense whereas, five (5) company employees have performed hajj on their own expense. These employees were presented gifts by the Chief Guest.



1st MAN OF THE QUARTER (MOQ) AWARDS - 2025

1st MOQ - 2025 awards ceremony was held at ARL Diner on May 27, 2025. Performance and Safety Awards were given to the employees. Further to motivate Junior Management staff, the company introduced a Quarterly Performance Award Scheme aimed at fostering a positive work environment. Under this initiative, awards were presented to selected Junior Management staff members based on their performance. **Valued Employee of the Quarter** award was received by Mr. Muhammad Sheraz, Head Supervisor, Oil Movement – II (PD), Operations Department. ARL Diner won the Quarterly Safe Man-Hours trophy.



Muhammad Sheraz
Operations

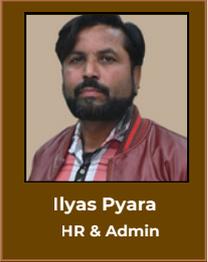
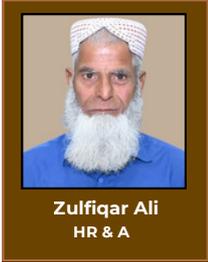
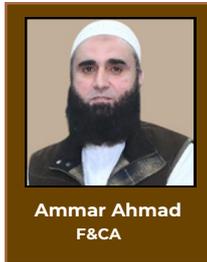
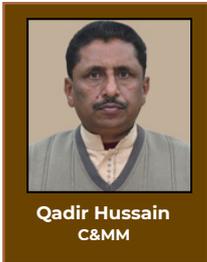
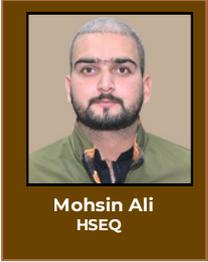
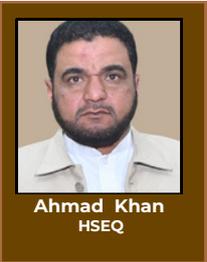
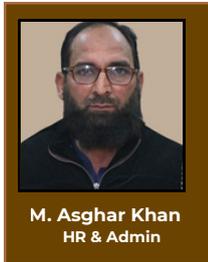
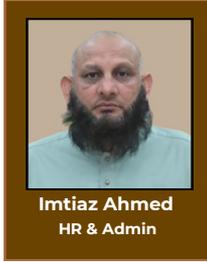
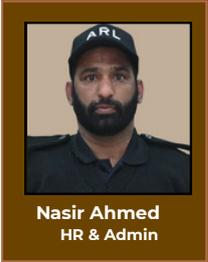
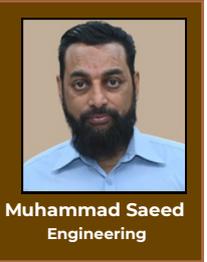
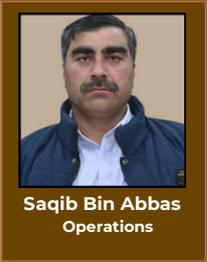
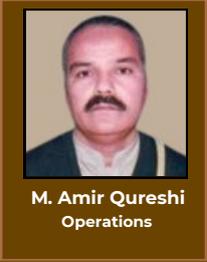
PERFORMANCE AWARDS

 Jamil Raza Operations	 Muhammad Zubair Operations	 Habib Ur Rehman Operations	 Muhammad Toqeer Operations	 Muhammad Munir Operations	 Irfan Ahmed Operations
 Maqsood Ahmed Operations	 Muhammad Umer Operations	 Naveed Hussain Maintenance	 Hassan Ali Maintenance	 Abdur Rehman Maintenance	 M. Inam Ul Haq Maintenance
 Hassan Mubarak Maintenance	 Shams-U-Zaman Engineering	 Shiraz Hussain Engineering	 Danish Salam HR & Admin	 Umair Raza HR & Admin	 Muhammad Riaz HR & Admin
 Mubashir Khalil HR & Admin	 Waqas Qayyum HR & Admin	 Asad Ullah HSEQ	 Asif Ramzan HSEQ	 Touseef Ahmed HSEQ	 Asif Ejaz C&MM
 Azeem Ashraf C&MM	 Khalid Mehmood F & CA	 Muhammad Shoab F&CA	 Muhammad Aqib HR & Admin	 Muhammad Yousaf HR & Admin	 Yoshwa Hr & Admin
 Irfan Yousaf HR & Admin	 Josphine Ejaz AHL	 Muhammad Saeed Operations	 Yasir Saleem Operations	 Muhammad Irfan C&MM	 M. Saeed Khan Maintenance

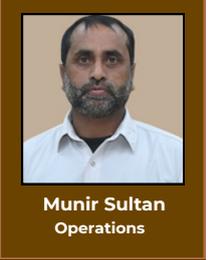
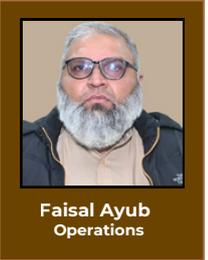
SAFETY AWARDS

4th MAN OF THE QUARTER (MOQ) AWARDS - 2024

In 4th MOQ - 2024 awards ceremony which was held at ARL Diner on February 20, 2025. Performance and Safety Awards were given to the employees. **Valued Employee of the Quarter award** was received by Mr. Muhammad Irfan; Storeman, C&MM, UHRS (General Service Staff). Quarterly Safe Man-Hours trophy was won by E & I section.



Safety Awards



TRAININGS

• A four days training program was organized by ARL on “Leadership Grid Seminar” from Feb 24 - 27, 2025. Mr. Mian Asim Aziz and Mr. Khalid Javaid Iqbal from M/s Grid International Inc conducted the training.



• A training workshop on “Control Valve and Safety Valve sizing” was arranged through M/s MEC (pvt.) Limited on April 08, 2025. In which experts from imparted their knowledge on the subject.



• ARL arranged a training program on “Fundamentals of Negotiation” in collaboration with the Petroleum Institute of Pakistan, Karachi. This training was conducted by Mr. Muhammad Shahzar Ilahi on May 06, 2025.



TRAININGS

- ARL organized two days training workshop on “Project Management Fundamentals” in collaboration with the Petroleum Institute of Pakistan, Karachi on June 16-17, 2025. The training was conducted by Mr. Farrukh Abbas.



- ARL organized a training workshop on “Safe Workplaces: Understanding and Combating Harassment” in collaboration with M/s FOSPAAH on June 25, 2025. The training was conducted by Ms. Mah Rukh.



FUELTERNSHIP - 2025

Annual internship program with the name of “**Fuelternship**” for students for the duration of 4-6 weeks. The purpose of this program is to provide professional & industrial exposure to the students who belong to different reputed institutions across the country. The students are also given formal orientation sessions in the batches.



INDUSTRIAL / EDUCATIONAL VISITS AT ARL

- A group photo of a delegation from the National Institute of Public Administration (NIPA), Quetta, during its visit to ARL on April 7, 2025



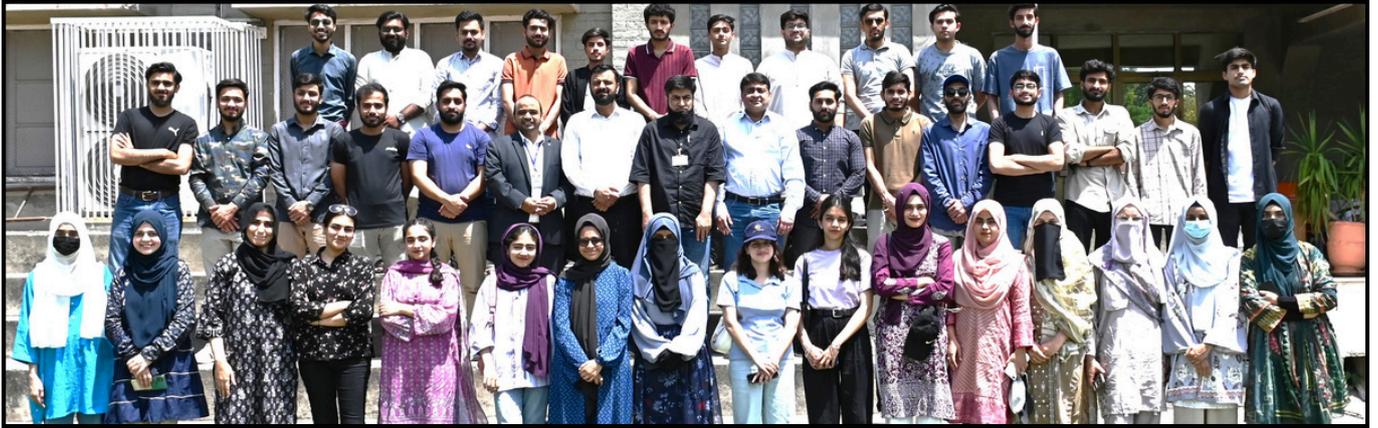
- A group photo of a delegation from the Pakistan Atomic Energy Commission, Jauharabad visited ARL on May 29, 2025



- A group photo of a delegation from the Army Service Corps School, Nowshera visited ARL on May 6, 2025



● A group photo of students from the National University of Sciences and Technology, Islamabad visited ARL on May 13, 2025



● A group photo of students from the National University of Technology (NUTECH) Islamabad visited ARL on May 20, 2025



● A group photo of students from the Government College of Technology, Taxila visited ARL on April 29, 2025



● A group photo of students from the Applied Technologies Institute NLC Mandra, Rawalpindi visited ARL on April 22, 2025



OUR GREAT ASSET

Welcome to the crew that thrives on enthusiasm and hard work. Your role here is essential and we are happy to have you in this journey.

Sr.No	Name	Designation	Department	Date of Joining
1	Mr. Abdul Waqas	Private Secretary	Engineering	01-Jan-25
2	Mr. Muhammad Kashif	Senior Officer (Operations)	Operations	02-Jan-25
3	Mr. Hanzallah Khattak	Senior Officer (Operations)	Operations	07-Jan-25
4	Mr. Jehan Zeb	Senior Officer (Maintenance)	Maintenance	24-Mar-25
5	Mr. Ashar Ali Khan	Engineer (HSE)	HSEQ	25-Mar-25
6	Mr. Basit Shabir	Senior Officer (Finance)	F&CA	28-Mar-25
7	Mr. Muhammad Amaar Siddique	Engineer (Operations)	Operations	01-Apr-25
8	Mr. Qaisar Iqbal	Senior Officer (Instrument)	Maintenance	03-Apr-25
9	Mr. Aneem Aurange Zeb Khan	Senior Officer (Maintenance)	Maintenance	14-Apr-25
10	Mr. Muhammad Siddique	Senior Officer (Operations)	Operations	16-Apr-25
11	Mr. Muhammad Shah Nawaz	Senior Officer (Instrument)	Maintenance	28-Apr-25
12	Mr. Amir Qayyum	Senior Officer (Instrument)	Maintenance	30-Apr-25
13	Mr. Muhammad Sharif	Engineer (Inspection)	Engineering	02-May-25
14	Mr. Muhammad Bilal Zubair	Senior Officer (Operations)	Operations	02-May-25
15	Mr. Ali Usman	Senior Officer (Operations)	Operations	02-May-25
16	Mr. Hassan Mehmood	Officer (IT)	C&MM	18-Jun-25
17	Mr. Muhammad Jan	Engineer (Operations)	Operations	20-Jun-25
18	Syed Hammad Ali Wasti	Engineer (Instrument)	Maintenance	20-Jun-25
19	Ms. Aneela Ali	Senior Officer (Finance)	F&CA	20-Jun-25
20	Ms. Sadia Yasir	Senior Officer (Finance)	F&CA	20-Jun-25
21	Mr. Ali Hamza	Engineer (Instrument)	Maintenance	20-Jun-25
22	Mr. Muhammad Umer Farooq	Senior Officer (Operations)	Operations	23-Jun-25
23	Ms. Areej Wasif	Senior Officer (Procurement)	C&MM	24-Jun-25
24	Mr. Abdul Khaliq	Senior Officer (Operations)	Operations	30-Jun-25

Appreciation Awards on Achievements

ARL management continuously praises its employees with appreciation awards on their long service to the company.

25 Years of Dedicated Service Award

In recognition of their valuable association with ARL and upon completion of 25 years of dedicated service, the Management presented shields to the following staff members:

- Mr. Naeem Shahzad, Deputy Manager (IT)
- Mr. Mr. Muhammad Amin Kahoot, Assistant Manager (Finance)
- Mr. Muhammad Younis Soomro, Senior Executive (Operations)
- Mr. Muhammad Shakeel Ahmad, Senior Officer (Maintenance)
- Mr. Waseem Iqbal Awan, Senior Officer (HSE)

Welcome Connect

New joiners were warmly welcomed at the Welcome Connect, an initiative designed to help them to start their journey. An informal and friendly event was arranged to exchange valuable feedback.



A Walk to Remember --- Mighty “Batura Glacier”



I am thrilled to share a cherished memory from June 2016, an unforgettable expedition I took with a couple of friends to the breathtaking Batura Glacier in Upper Hunza.



Let me introduce briefly: Batura is one of the world's natural wonders, the 5th longest glacier outside the Polar Regions, stretching an astonishing 57 kilometers, quietly resting along the Karakoram Highway (KKH). We are incredibly fortunate to have such a majestic glacier right here in Pakistan. Interestingly, despite its sheer size, it's hardly visible from the road. Like most other glaciers, its termination point is masked, as usual, under debris, boulders, and gravel, making it easy to miss unless you know what you're standing on. For the casual travelers, it often raises only one curious question: why is there such a cool breeze under the blazing sun? 😊



Unlike the full-fledged trekking route, which demands 8 to 10 days to explore its true breadth and width, my journey was limited to reaching its mouth, a brief yet soulful 3-hour encounter. We parked our vehicle under the signboard “Batura Glacier,” and began our hike toward Batura Sar (Peak). To our surprise, just 30 minutes into the trek, we found ourselves at the edge of the glacier, merely half a kilometer from the main road. It turned out to be one of the easiest and most rewarding treks I have ever experienced to reach such a massive glacier.

And what a dreamlike experience it was, on one side we were feeling extreme heat of sun and on the other side, touch of cool breeze glacial ice. One hand shielding from the sun, the other resting on solid, ancient ice, what a magical contrast.

For me, glaciers like Batura are living entities, children of their towering parent peaks, connected and nurtured in silence. There's something profoundly emotional about standing at their feet, feeling their breath, their presence, their vivacity, and knowing their journey has taken centuries to be here and they own this ambiance more than us but sadly we have not reciprocated in an ethical manner and selfishly losing them with every passing day!



It's been a while now, but the memory remains vivid. I often find myself wishing to return. This time, with more days in hand, and a plan made solely for this magnificent giant... the lovely Batura Glacier.

Bridging Generational Diversity in Organizational Culture



A Workplace at the Crossroads of Time

Today's workplace is unlike any before: for the first time in history, four generations: Baby Boomers (1946–1964), Gen X (1965–1980), Millennials (1981–1996), and Gen Z (1997–2012) are working side by side. This generational intersection,

accelerated by the post-COVID shift to hybrid work and evolving digital tools, has transformed expectations, communication styles, and workplace dynamics.

While such diversity holds immense potential, it also creates friction unless addressed through a well-crafted, inclusive and adaptive organizational culture. The challenge for modern leadership is to foster a workplace that not only welcomes all generational traits but leverages their strengths collaboratively for long-term growth.

Core Elements of a Multigenerational Culture Psychological Safety and Resilience

In a world still recovering from the aftershocks of COVID-19, psychological safety has emerged as a critical success factor. A culture where individuals regardless of age feel safe to voice opinions, admit mistakes, or question the status quo nurtures innovation and unity.

Communication That Bridges Digital & Generational Gaps

Each generation has a preferred communication style:

- Boomers prefer face-to-face or phone conversations.
- Gen X and Millennials lean towards emails and video calls.
- Gen Z favors instant messaging and digital collaboration tools.

To address this, organizations must create a blended communication model using digital platforms alongside traditional touchpoints ensuring clarity and inclusion.

Flexibility: The New Workplace Currency

The post-pandemic reality has ushered in flexibility as a non-negotiable.

- Boomers may still value structured routines.
- Millennials and Gen Z expect flexible hours, hybrid models, and work from anywhere policies.

A culture embracing results over hours clocked appeals across all generations.

Purpose-Driven and Inclusive Culture

Across generations, a shared sense of purpose is emerging. Yet, Gen Z and Millennials place significantly more weight on alignment between personal values and the organization's mission.

Two-Way Mentorship and Knowledge Exchange

- Gen Z and Millennials to mentor Boomers on digital tools.
- Boomers and Gen X to share strategic wisdom.

Continuous Learning and Upskilling Culture

- Gen Z favors microlearning.
 - Millennials prefer leadership development.
 - Boomers value structured workshops.
- A culture of lifelong learning benefits all.

Recognition and Feedback Personalization

Different preferences:

- Boomers: Formal awards.
- Millennials: Peer recognition.
- Gen Z: Real-time feedback.

A multi-layered recognition approach ensures inclusivity.

Well-being and Ethical Leadership

Burnout and stress affect all generations—particularly Gen Z. Organizations must embed wellness in daily routines.

Generational Comparison Table

Sr. #	Cultural Element	Boomers /Gen X	Millennials	Gen Z
1	Work Style	Structured, hierarchical	Flexible, collaborative	Agile, tech-native
2	Communication	Direct, formal	Email, calls	Chat, video, emojis
3	Learning Style	In-person, seminars	E-learning, workshops	Microlearning, on-demand
4	Motivation	Stability, pension	Purpose, growth	Impact, feedback
5	Recognition	Annual awards	Regular feedback	Real-time appreciation

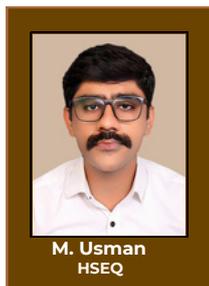
Conclusion: Culture as the Competitive Advantage

The future belongs to workplaces that blend experience with innovation, structure with flexibility, and legacy with purpose. When organizations align their cultural values to embrace generational diversity, they don't just retain talent they build a cohesive, forward thinking, and resilient workforce.

At ARL and beyond, it is time to reimagine our organizational culture not as a static code of conduct, but as a living system, responsive to the evolving values, needs, and energies of each generation. Let us foster a culture where every generation contributes, collaborates, and co-creates the future of work.

“Generational diversity is not a challenge to overcome, but a strength to harness.”

Plastic Nation: Pakistan is Drowning in Convenience and Heating Up the Planet



Plastic Nation: Pakistan is Drowning in Convenience and Heating Up the Planet

Plastic has become a symbol of modern convenience found in our food packaging, shopping bags, drink bottles, electronics and even clothes. But this convenience is costing us more than we

realize. Pakistan, like many other developing nations, is grappling with a plastic crisis that is no longer just an issue of littering; rather, it is now fueling climate change, damaging ecosystems and putting human health at risk.

Pakistan generates over 3 million tonnes of plastic waste every year, and around 65% of it is mismanaged. It means it is dumped into landfills, open fields or directly into the rivers. The Indus River is now listed among the top 10 most plastic-polluted rivers globally, carrying over 150,000 tonnes of plastic annually into the Arabian Sea.

More than 70% of this waste comes from single-use plastics bags, wrappers, bottles, straws and disposable utensils. A staggering 55 billion plastic bags are used in Pakistan each year, roughly 250 bags per person.



The Plastic-Climate Connection

What many people don't realize is that plastic is a fossil fuel product. It is made primarily from crude oil and natural gas. From extraction and refining to manufacturing and incineration, every stage of the plastic lifecycle emits greenhouse gases. Globally, the production and disposal of plastic emit over 850 million tonnes of CO₂ equivalent annually and that figure is projected to more than double by 2050 if we don't act.

In Pakistan, plastic waste is often burned in open air, especially in urban slums and along roadsides. This combustion releases toxic pollutants such as black carbon, a potent climate force with a global warming potential hundreds of times greater than CO₂. This contributes not only to rising local temperatures and urban heat effects but also to air pollution and respiratory diseases, especially in the densely populated cities of Pakistan.

Health Under Attack

Microplastics, the tiny plastic particles that result from the breakdown of larger debris, are now

found in Pakistan's tap water, table salt, freshwater fish and even in breast milk samples, according to recent studies. These particles can enter human organs and bloodstreams, potentially causing hormonal disruptions, inflammation, infertility and even cancer.

Open burning of plastic also releases dioxins, furans and heavy metals, which are carcinogenic and linked to developmental issues, especially in children. In communities located near informal waste-burning sites, doctors report elevated rates of asthma, bronchitis and skin disorders.

An Environmental Domino Effect

Plastic doesn't just pollute but it transforms the ecosystems. Turtles mistake bags for jellyfish, cows in rural areas ingest plastic during grazing and birds feed microplastics to their chicks. In coastal areas of Sindh and Balochistan, entire mangrove belts are suffocating under plastic waste, threatening the fisheries, biodiversity and storm-buffering ecosystems that protect coastal communities from climate impacts like cyclones and sea-level rise.

Clogged drainage systems in cities lead to urban flooding during monsoon season, costing millions in damages annually. In 2022, over 30% of the damage from flooding in Karachi was attributed to blocked stormwater drains filled with plastic waste.

The Way Forward: Systemic and Individual Change

The government of Pakistan launched several initiatives, including the Clean Green Pakistan Movement and provincial bans on plastic bags in recent years. But enforcement remains inconsistent and public awareness is still limited. To tackle this crisis, we need behavioural change, industry accountability and government action. Here is what we can do:

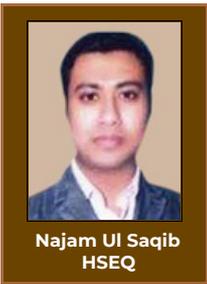
- **Say no to single-use plastics:** Carry reusable bags, bottles and containers.
- **Support plastic-free alternatives:** Made from jute, sugarcane, bamboo and biodegradable polymers.
- **Segregate waste:** This will help to properly recycle or reuse the plastic material.
- **Raise awareness:** In communities, workplaces, homes and schools.
- **Hold brands accountable:** Discourage them for their packaging choices and carbon footprints.

Final Thought

Plastic pollution is no longer a side issue; it is deeply tied to Pakistan's climate vulnerability, public health and economic stability. What began as a tool of convenience has spiralled into a global threat.

We can no longer afford to treat plastic as a disposable luxury. Whether it's in our lungs, rivers or oceans, plastic is everywhere. Tackling this crisis is not just an environmental obligation but a necessity for the survival of future generations. Because the cost of plastic is not just paid at the checkout, it's paid with our health, our planet and our future.

How Quality Culture Transforms Safety and Performance



In the complex world of oil refining, where high pressure systems, hazardous materials and round-the-clock operations define the workplace safety and performance are not just priorities; these are survival essentials. However, there is one powerful force that often operates behind the scenes and silently shapes the "quality culture".

In today's rapidly evolving industrial landscape, the lines between quality, safety and performance are no longer separate lanes. These are threads woven into a single fabric and that fabric is the organizational culture that defines how people work, act, communicate and respond under different scenarios.

The notion of organizational culture has long been presented in the management science literature and this concept was first introduced by Elliott Jaques in his book, *The Changing Culture of a Factory*, in 1951. There are numerous definitions of this approach but Mr. Geert Hofstede, a Dutch social psychologist and organizational researcher, defined it as "the collective programming of the mind which distinguishes the members of one organization from another".

What is quality culture?

The concept of quality management traces back to medieval Europe when craftsman guilds developed guidelines for how products were inspected for defects. Until the early 19th century, the industrialized world tended to follow the craftsmanship model. In the late 19th century, mechanical engineer Frederick Winslow Taylor broke traditional European quality practices and developed a new approach, which focused on increasing productivity and profitability without increasing the number of craftsmen and published "The Principles of Scientific Management," which laid the foundation for how to optimize operational efficiency.

In the 1920s, engineer Walter Shewhart developed a method to improve production processes by reducing variation. Later, Shewhart and statistician William Deming developed Shewhart's methods for the production of military

goods during World War II, enabling faster inspections without compromising product safety or quality. Shewhart's methods (also known as the Shewhart Cycle) served as the basis for the Plan-Do-Check-Act (PDCA) cycle, which is a key component of today's quality management systems

A quality culture is significantly influenced and moulded by the overall organizational culture and this goes beyond monitoring, checklists, compliance, audits or certifications. It is the mindset and behavior embedded at all levels of an organization. Where doing right things is not just encouraged but is expected. It thrives on values like:

- Transparency
- Continuous improvement
- Accountability
- Learning from mistakes

When these values are shared by every individual, from technicians, analysts, engineers and top management, quality becomes a way of life, not just a department name. Attock Refinery Limited (ARL) has already set six core values for success; Integrity, Quality, Social Responsibility, Learning & Innovation, Teamwork and Empowerment. Unless these values are deeply embedded in daily behaviors at all levels, we may not develop a proper quality culture.

The Real-World Link Between Quality and Safety:

Quality and safety are intrinsically linked. Quality management focuses on meeting customer expectations and standards, while safety management aims to protect people and the environment from harm. Quality issues can create safety hazards and a strong safety culture contributes to a high-quality product or service. For example, a faulty weld in a vessel could lead to accidents and an accident can disrupt production, affecting the quality.

One of the most pressing challenges that industries face today is incident underreporting and normalization of deviations. Minor leaks, expired chemicals, calibration oversights or undocumented results may seem minor until they snowball into critical failures.

In a lab or refinery, even a small deviation, like using a reference material just before expiry or skipping a double-check on results, can lead to compromised product quality or dangerous unsafe conditions. When quality culture is weak, employees may hesitate to report issues or take shortcuts to "save time," unknowingly putting lives and assets at risk.

What is strong Quality culture?

In a strong quality culture:

- Staff raise concerns proactively.
- Non-conformances are investigated without blame and putting pressure.
- Lessons are shared to prevent recurrence.

This openness directly strengthens not only the improved quality culture but also safety and performance because problems are addressed at the root, early and effectively.

It's a myth that focusing on quality slows down performance. In fact, it's the opposite.

- **Clear procedures, Less confusion and delay**
- **Trained staff, Faster & more accurate decisions**
- **Standardized practices, Consistent output**
- **Fewer Incidents/rework & No Breakdown**

Companies that embed quality into daily operations not only reduce safety related incidents but they also boost productivity, employee morale and customer trust.

At the same time, many organizations are dealing with:

- Staff shortages
- Knowledge gaps
- High turnover
- High shutdowns due to less skilled resource

In such conditions, a robust quality culture becomes the backbone that holds systems together and enables resilience. In an oil refinery or any high-risk industrial setting, technical excellence must be supported by cultural strength. A quality culture is not just a philosophy; it is a safety, a performance booster and a source of trust. By prioritizing quality, companies can reap the benefits of a safe and healthy work environment leading to a more productive and an engaged workforce.



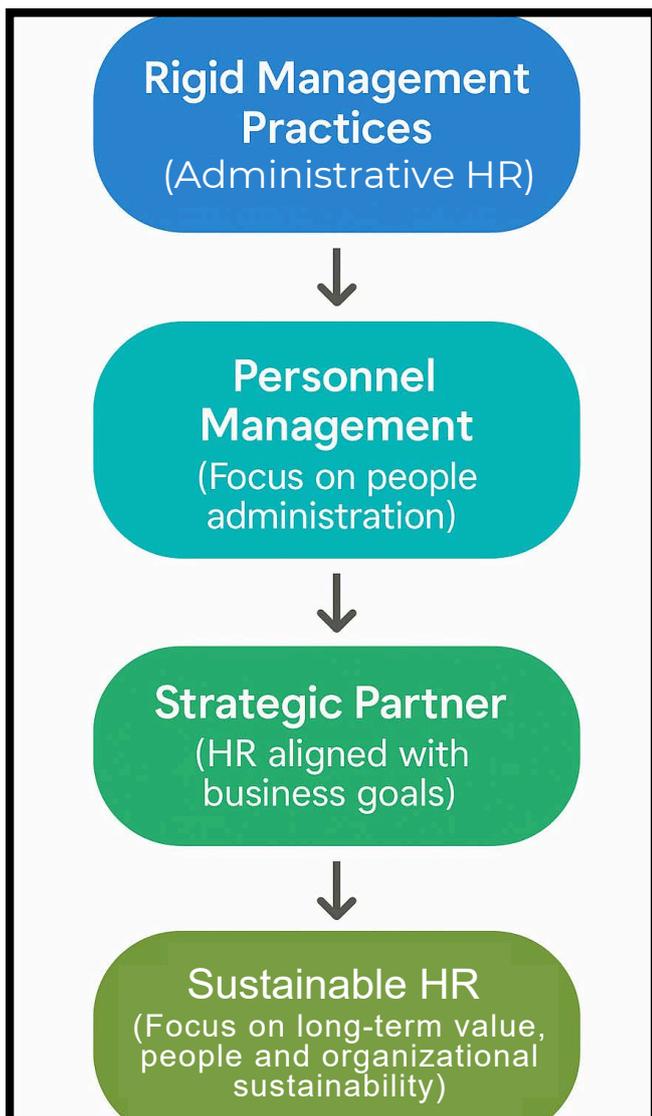
A journey from Personnel Management to Sustainable HR: From organizational to Global Agenda



Obaidullah
HR & A

Management practices have evolved dramatically over the past century, transitioning from rigid, traditional structures to more flexible, innovative, and inclusive approaches. In response to the traditional rigid management, the Human Relations Movement emerged in the

1920s and 1930s, focusing on the human aspect of work emphasizing on importance of employee well-being, motivation, and interpersonal relationships in achieving organizational success. The human relations movement paved the path for the emergence of today's Human Resource Management. The roots of Human Resource Management (HRM) lie in the administrative and transactional practices of personnel management, which primarily focused on employee record-keeping, payroll, and compliance with labor laws, with limited emphasis on strategic planning or employee development.



The late 20th century marked the emergence of Human Resources Management as a distinct field, bringing a more holistic and integrated approach to managing people at work place, and the field of HRM then has continuously been transforming, driven by advancements in technology, changing workforce demographics, and shifting business strategies. In today's business world HR is considered as strategic partner in achieving the organizational goals and human capital as key resource of competitive advantage.

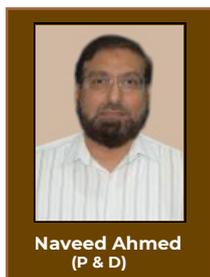
Keeping in view the transformation of traditional HR to Sustainable HR and particularly in Pakistan, we must be aware that Pakistan was the first country who adopt sustainable Development Goals as its National Development Agenda through unanimous resolution in National Assembly.

In line with SDGs and due to worldwide environmental degradation, governments including Pakistan require to engage diverse stakeholders, including strategists, researchers, policymakers and academics to meet these goals. Amongst the other professionals from various fields, HR professionals have also been acknowledged as key contributors of sustainability and SDGs. HR has the potential to shape organizational values, drive environmental responsibility, and foster a workforce that is both aware of and committed to climate action. By fostering inclusive cultures, upholding ethical labor standards, and implementing green HR practices, the role of HR as strategic partner has increased manifold. HR requires active role in shaping and implementing organizational strategies that prioritize sustainability, embedding sustainability principles into every aspect of its operations. This transition marks a meaningful change; HR is no longer solely focused on aligning practices with business objectives. Instead, it now also considers the long-term well-being of employees, environmental impact, and broader societal responsibilities. This is what we call Sustainable HR. Sustainable HR is about creating long-term value for employees, organizations, and society by aligning HR practices with environmental, social, and ethical goals".

At its core, sustainable HR aims to build a resilient, ethical, and future-ready workforce. This includes fostering a positive culture, supporting work-life balance, and aligning organizational goals with broader societal responsibilities.

By embedding sustainability into HR at every level, organizations not only enhance employee engagement and brand reputation but also contribute meaningfully to a more resilient, equitable, and sustainable future. Sustainable Human Resource Management is no longer just a trend; it's a necessity for long-term success.

Project Execution Methodologies



Naveed Ahmed
(P & D)

Upgrading an oil refinery is a complex, capital-intensive project requiring careful planning, robust execution and risk management. Choosing the appropriate project execution methodology is critical to

ensuring cost-efficiency, schedule adherence and compliance with safety and environmental standards. Below are the main types of project execution methodologies commonly used in industrial upgradation projects:

1. EPC (Engineering, Procurement and Construction)

Overview:

This turnkey approach assigns full responsibility to a single contractor for delivering the project from design through commissioning.

Advantages:

- Single point of accountability
- Fixed-cost and schedule contracts reduce risk to the owner

Challenges:

- Less flexibility for the owner to influence design changes post-award
- Higher premium cost for transferred risk
- No Front-End Engineering

2. EPCM (Engineering, Procurement and Construction Management)

Overview:

The owner hires a contractor to manage the design, procurement and construction activities while retaining direct contracts with suppliers and subcontractors.

Advantages:

- Greater control over project components
- Potential cost savings through direct procurement

Challenges:

- Higher risk retained by the owner
- Requires strong owner project management

3. Lump Sum Turnkey (LSTK)

Overview:

It is similar to EPC but often used in smaller and well-defined scope projects.

Advantages

- Fixed price and schedule
- Clear risk transfer to contractor

Challenges:

- Scope changes can be costly
- Requires highly detailed front-end engineering

4. Design-Build (DB)

Overview:

A single entity is responsible for both design and construction, typically with more design-build integration.

Advantages:

- Faster project delivery
- Improved collaboration

Challenges:

- Less competitive pricing due to bundled services
- Design constraints may emerge due to construction-led focus

5. Build-Operate-Transfer (BOT)

Overview:

A project delivery method where a private entity finances, designs, builds, and operates a facility for a fixed period, after which ownership is transferred to the public sector. More common in infrastructure, this model may apply to refinery auxiliary units (e.g., power plants or water treatment).

Advantages:

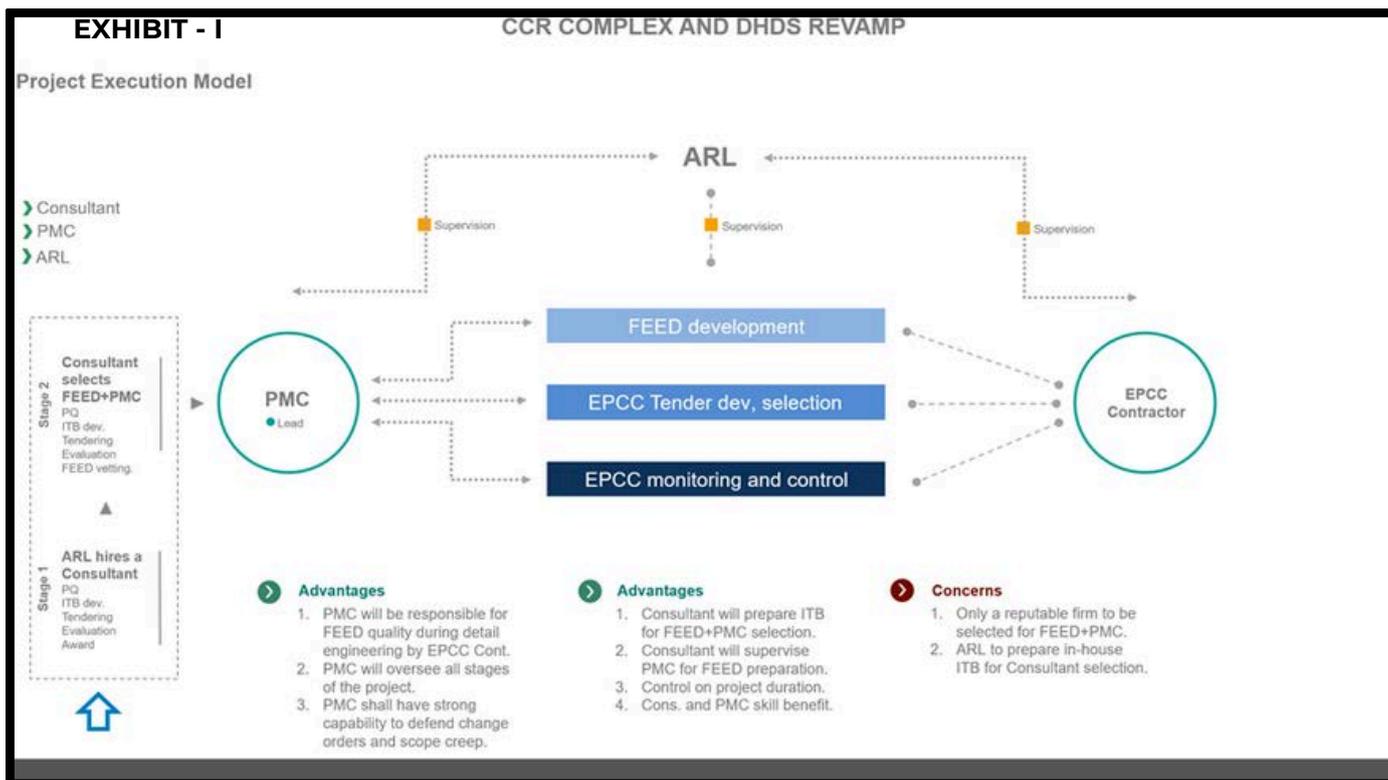
- Reduced upfront capital cost for the owner
- Long-term performance risk stays with the operator

Challenges:

- Complex legal and financial structuring
- Limited control during operation phase

Choosing the Right Methodology

The ideal execution strategy depends on multiple factors, including project size, technical complexity, owner capability, financing and risk appetite. For major refinery upgrades, a hybrid approach—blending EPC for high-risk units and EPCM for utilities—can often deliver optimal results.



ARL Upgradation: Please refer to **Exhibit-I**. The involved entities and their roles are as follows:

1. Licensor:

To develop the licensor’s FEED i.e., the Basic Engineering Design Package (BEDP) of the process units (Inside Battery Limit).

2. Consultant:

To develop tender documents for selection of FEED & PMC Contractor, including review of Project FEED.

3. Project FEED Contractor:

To develop Front End Engineering Design (FEED) of utilities, auxiliaries and interconnecting piping etc.

4. Project Management Consultant:

To undertake management and control of all or

any stage of the project execution.

5. EPCC Contractor:

The EPCC (Engineering, Procurement, Construction & Commissioning) Contractor will undertake the project execution and construction till handing over of units to ARL.

Conclusion:

Effective execution methodology selection is not one-size-fits-all. Strategic alignment with project objectives, stakeholder expectations and market conditions is essential to delivering a successful oil refinery upgradation project.

Hybrid Co-Combustion of Coal Dust with Biomass



Abstract

An urgent energy challenge has existed globally for some time, mainly due to our reliance on fossil fuels like hydrocarbons. Besides causing environmental pollution, recent supply chain security issues have led to high prices. To address these problems, both developed and developing countries are

investing in local energy sources, including nuclear, hydroelectric and renewable options like solar and bio-based fuels.

Clean and sustainable energy is now essential. For this reason, we present this work on designing and developing a hybrid solid fuel that is partially renewable by using biomass mixed with coal. This study selected sub-bituminous coal as a feedstock with biomass because it needs less processing and has lower environmental impacts.

This hybrid fuel blends sub-bituminous coal and biomass to offer a practical solution between traditional fossil fuels and renewable energy. The

study tested different mixture ratios to achieve cleaner burning, low ash content (4–5%), and high calorific value (18,000–22,925 J/g). The hybrid fuel will be used in powder form (<125 μm) in a custom laboratory-scale centrifugal furnace. The work also includes the design of a sustainable plant for producing this hybrid fuel with material and energy balances.

Introduction

For the past 200 years, carbon-based fuels have been widely used to meet the world’s growing energy needs. However, global energy use has increased due to concerns about greenhouse gas emissions from fossil fuels and the poor management of these resources.

Rapid population growth is driving even higher energy demand. Oil and coal alone supply over 60% of global energy, with oil at 33% and coal at 30%.

The conflict in Ukraine has also disrupted energy supplies. Sanctions on Russia have limited energy imports to Europe and beyond as countries look elsewhere for fuel. The

World Bank estimates energy prices rose by over 50% in 2022 and combined with other impacts, this could lead to economic stagnation not seen in decades.

Traditional fossil fuels are being used so heavily that supplies are shrinking and costs keep rising. Coal remains a major energy source due to its wide availability and high energy content.

To reduce costs and pollution from fossil fuels, many countries are shifting to renewable sources. Fossil fuels still cause 90% of carbon dioxide emissions and over 75% of global greenhouse gases, so urgent action is needed. Renewables like geothermal, biomass, solar, wind and hydropower offer practical alternatives.

Mixing coal dust with biomass is a promising way to make coal use cleaner and more sustainable. This approach helps lower processing needs and reduces environmental impact, bridging the gap between fossil fuels and renewables.

Using hybrid solid fuel a mix of coal and biomass can reduce carbon emissions from coal burning. This is especially valuable in Pakistan, where coal plays a big role in the energy sector. Biomass comes in four main types: woody (trees, bamboo), non-woody (grass, stems, cotton), processed fuels (biogas, charcoal) and other agricultural waste. Each type has different sizes and moisture levels.

Solid waste from the olive oil industry is a good biomass source for energy. Olive tree waste has low amounts of harmful chemicals like nitrogen, sulfur and chlorine, making it safe for burning. Mustard biomass has high energy value.

Pyrolysis tests show up to 60% breakdown at heating rates of 5–50°C per minute.

In today's world, where clean energy and a variety of sources are vital, burning coal dust mixed with biomass like olive and mustard waste offers hope. This blend achieves the needed Calorific Value and temperature, uses waste effectively and lowers greenhouse gas emissions.

Methodology



Fig.1: Low-rank coal

Raw Material Sampling and Experimental Work

Biomass (olive tree waste / mustard seed waste) and low-rank coal (bituminous / sub-

bituminous) were used as raw materials.

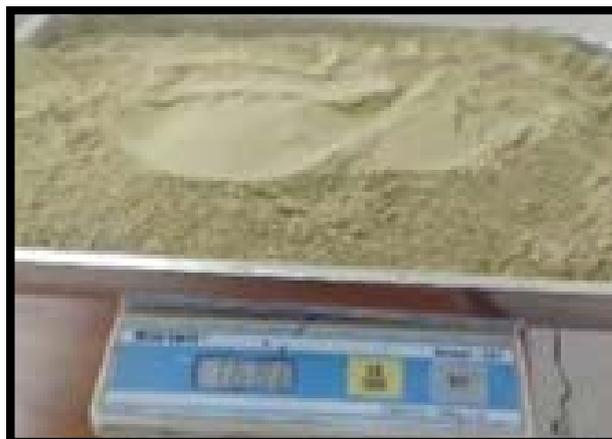


Fig 2: Olive tree waste



Fig.3: Mustard seed waste

For testing, 1 kg samples were prepared by mixing coal and biomass in different proportions. Mixing was done manually by combining the materials in buckets until the blend was uniform. This careful mixing ensured the fuel met the required quality for burning.

A. Blend Ratio and GCV Values

After mixing the 7 samples, their Gross Calorific Value (GCV) was measured using a bomb calorimeter. Proximate analysis was also performed to determine moisture content, ash content and volatile matter in each sample.

Table 1: GCV Value of each sample

Sample	Coal	Olive Tree Waste	Mustard Seed Waste	GCV Value
1	800 g	200 g	-	18000 J/g
2	700 g	300 g	-	17500 J/g
3	600 g	400 g	-	19320 J/g
4	600 g	100 g	300 g	22000 J/g
5	500 g	-	500 g	19450 J/g
6	800 g	-	200 g	23320 J/g
7	700 g	-	300 g	22925 J/g

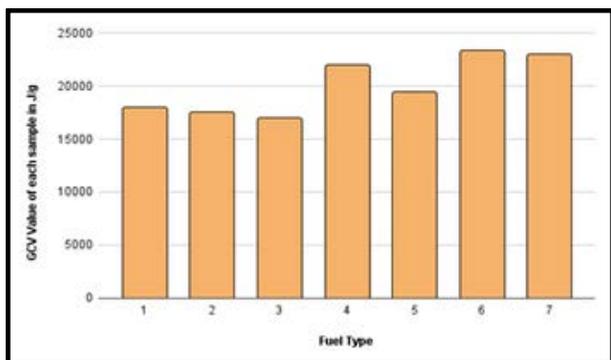


Fig.4: Fuel Type vs GCV value Graph

Ash Content

Table 2: Ash Content

Sample No.	Sample Weight (g)	Ash Weight (g)	Ash Content
1	1	0.04	4.00 %
2	1	0.05	5.00 %
3	1	0.06	6.00 %
4	1	0.07	7.00 %
5	1	0.06	6.00 %
6	1	0.07	7.00 %
7	1	0.08	8.00 %

Table 3: Flame Length and Exit Temperature

Sample No.	GCV Valve (J/g)	Flame Length(inch)	Exit Temperature (Max) °C
1	18000	8	362
2	17500	7.2	350
3	17000	10.2	330
4	22000	11	380
5	19450	10	376
6	23320	9.7	402
7	22925	10.5	391

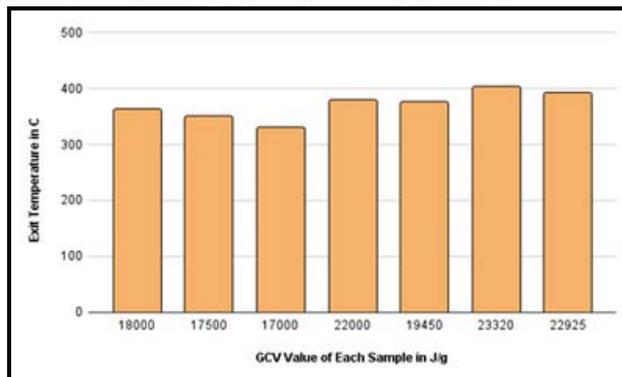


Fig.6: GCV Value Vs Exit Temperature

B. Environmental Benefits

When compared to burning coal alone, cofiring dramatically lowers greenhouse gas emissions, especially CO₂. Because biomass components are thought to be carbon-neutral over the course of their lives, they help to reduce net carbon emissions.

C. Combustion Properties

The co-firing mixes show positive properties related to combustion. Because mustard biomass and olive tree waste have less sulfur than coal, they release less SO₂. Although the ash content and behavior are within allowable bounds, ash management may require more improvement.

D. Economic Viability

Based on prospective regulatory incentives and long-term environmental benefits, co-firing may prove to be cost-effective, according to an economic study. The accessibility of biomass resources nearby lowers transportation expenses, improving the overall viability of the project.

E. Sustainability Impact

This project supports sustainability by reducing dependence on fossil fuels, lowering emissions and making use of agricultural waste for clean energy production.

References

1. Naqvi, S.R., et al., Assessment of agro-industrial residues for bioenergy potential by investigating thermo-kinetic behavior in a slow pyrolysis process. 2020. 278: p. 118259.
2. Shahbaz, M., et al., A state of the art review on biomass processing and conversion technologies to produce hydrogen and its recovery via membrane separation. 2020. 45(30): p. 15166-15195.
3. Khan, Z., et al., NO and SO₂ emissions in palm kernel shell catalytic steam gasification with in-situ CO₂ adsorption for hydrogen production in a pilot-scale fluidized bed gasification system. 2019. 236: p. 117636.



Fig.5: Centrifugal Furnace

Results and Discussion

The co-firing of coal with biomass from mustard and olive trees presents a viable approach to improving the sustainability of energy generation.

Table 3: Flame Length and Exit Temperature

This research has shown a number of important conclusions.

A. Feasibility and Efficiency

It is technically possible to co-fire waste from olive trees and mustard biomass, with only minor alterations needed to currently operating coal-fired power plants. Coal is successfully complemented by the stable and efficient combustion process.



غزل

از قلم: ساجد حسین قریشی

تعمیرِ ذات کی خفت ، کا بے کوپڑے کوئی
جنسِ بے طلب کی رغبت ، پاگل ہی کرے کوئی
میرے دور کے واعظ بھی، حُبِ دنیا میں غرقاب
اور پھر حسنات کی دعوت ، کان کیوں دھرے کوئی
یہاں مصروف بے بر شخص ، اپنی دنیا بنانے میں
بھاڑ میں جائے قرابت ، چاہے اب مرے کوئی
اس عصر کے حسینوں کو، کیوں دیکھے جھروکوں سے
میسراب عام بے قربت ، کا بے کو ڈرے کوئی
اپنی مٹی کی خوشبو تو، کبھی پانی سے آتی تھی
پھر لوٹاؤ وہ لذت ، بناؤ ساجد گھڑے کوئی



نظم

از قلم: زین حسن

خشک صحرا کی طرح زرد ہیں آبی نہ رہے
میری ہر رات کے احوال جوابی نہ رہے
میری شاموں کو جو رنگین بنا دیتے تھے
کیا کہوں اب کہ وہ لوگ نوابی نہ رہے
جام الفت کا جہاں پی کے سبھی بانٹتے تھے
اب وہ میخانہ، وہ یار شرابی نہ رہے
جس طرح چاہیں ہمیں لوگ ستا لیتے ہیں
اب تو پہلے کی طرح ہم بھی حسابی نہ رہے
"بجر بیتا تو خد وخال سلامت تھے مگر
رنگ چہرے کا گیا، ہونٹ گلابی نہ رہے"
جن سے اٹھتی تھی جگر میں کہیں الفت کی کرن
حرف وہ ٹوٹ گئے ، لہجے شبابی نہ رہے
وہی کہہ دیتا ہوں جو کچھ زباں پہ آتا ہے
میری گفتار کے جملے تو کتابی نہ رہے
جانے کس اور چل پڑا یہ زمانہ اپنا
ڈھکے بدن مگر لباس حجابی نہ رہے
پہلے کردار تو کشتی کو جلا دیتے تھے
بحرِ افکار کہ پہلے سے سیلابی نہ رہے
پہلے اس نام پہ کتنی تھیں زبانیں کتنی
زین! اب لوگ بھی پہلے سے تراہی نہ رہے





Attock Refinery Limited
P.O. Morgah, Rawalpindi



92-51-5487041
Fax: 92-51-5487254

<http://www.arl.com.pk>
Linkedin: Attock Refinery Limited