

**LATEST ON THE OPERATIONS:**  
**Training & Recruitment**

All Ladies CTSI support team for DNR exclusive Suspended SAFWAY Scaffolding Training & Assessments paid a courtesy call to Recruitment & Training Department Personnel.

Application for U.S. Coast Guard Letter for various positions/skills is set to be submitted on April 29, 2022.

**Mr. RICKY RAMOS**  
Recruitment/Training Manager

**Mr. RONALD YBAÑEZ**  
Recruitment Officer



**Crewing Operations**

DNR Offshore & Crewing Services, Inc. successfully updated its accreditation with the United States Embassy, Manila through the Manning Agency Accreditation Program effective April 27, 2022 as



announced by  
**Mr. ROEL ABALLE,**  
Crewing Officer.



**BLUE  
PACIFIC**  
The official newsletter of DNR Offshore and Crewing Services, Inc.

**Managing risks in a sea of change:**

## The marine industry's transition to biofuels

**To minimize the potential risks associated with climate change, industries across the economy are taking action to cut carbon emissions with the intent of achieving carbon neutrality. The marine industry is no exception.**

Many countries and companies are following the emissions targets set by the Paris Agreement. Adopted at COP21 in December 2015, the Paris Agreement is the first universal and legally binding global climate agreement that establishes a framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C compared to pre-industrial levels. Industry initiative

The Agreement, however, did not specifically include the shipping sector. Instead, to set its own emission targets, in April 2018, member states of the International Maritime Organization (IMO), a specialized agency of the United Nations responsible for regulating shipping, adopted its initial Green House Gas (GHG) strategy. The strategy recommended that GHG emissions from international shipping peak as soon as possible and that the industry must reduce its total annual GHG emissions by at least 50% of 2008 levels by 2050, with a strong emphasis on zero emissions. This strategy essentially aligned emissions from shipping with the Paris Agreement

This Initial Strategy aims to help the marine industry:

- Reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008 (“the IMO Absolute Target”)

- Reduce CO2 emissions per transport work by at least 40% by 2030, pursuing efforts towards 70% by 2050 compared to 2008 (“the IMO Intensity Targets”).

### A heavy load

Like many industries, in striving to reach their emission reduction goals, marine operations face some considerable, yet not undauntable, challenges.

For one, maritime shippers support up to 80% of global trade and accounts for 2-3% of global GHG emissions annually, emissions that are comparable to large economies such as Germany and Japan, according to the World Economic Forum.

And global trade certainly isn’t slowing down. In fact, according to the Global Trade Update from the United Nations Conference on Trade and Development (UNCTAD), the value of global trade reached a record level of \$28.5 trillion in 2021, an increase of 25% over 2020 and 13% higher compared to 2019, before the COVID-19 pandemic struck. If no action is taken, it is estimated that increased activity could increase emissions from shipping between 50% and 250% by 2050.

### Alternative approaches

One big recent change that the industry recently implemented was IMO 2020, a rule that went into effect January 1, 2020. It limits the sulphur in the fuel oil used on board ships operating outside designated emission control areas to 0.50% m/m (mass by mass) - a significant reduction from the previous limit of 3.5%. This new limit was made mandatory following an amendment to Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL). Transitioning to biofuels and other alternative fuel mixes is another option that is offering the marine industry a fast path to achieving decarbonization and lessening its dependence of fossil fuels.

Biofuels are currently used in both aviation and road transport sectors. Bioethanol and biodiesel have been blended in gasoline since the end of the 1970s. Biobased jet-fuel blends were approved for the aviation sector in 2011. Biodiesel fuel in the marine sector has begun since 1998 when a feasibility study initiated the use of soybean biodiesel for recreational boats in the Great Lakes region in North America.

There are a variety of biofuel options including:

- First generation biofuels refer to fuel derived from crops like starch, corn, sugar cane, wheat, animal fats and vegetable oil to make bioethanol.

- Second generation biofuels include wood, organic waste, food waste and specific biomass crops. These are only made from lignocellulosic crops.

Lignocellulosic crops are mainly hard, woody crops. Currently, there is limited application of this type of biofuel in shipping. Second-generation biofuels are not yet produced commercially, but a considerable number of pilot and demonstration plants have been announced or set up in recent years, with research activities taking place mainly in North America, Europe and a few emerging market countries such as Brazil, China, India and Thailand.

- Third generation biofuels include algal fuel which can yield up to 30 times more energy per acre than land crops like soybeans. Algae can be used to produce vegetable oil, bioethanol, bio-methanol, biobutanol, biodiesel, and other biofuels.

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### Some hurdles

While biofuels are promising, there are some associated risks. Plant-based biofuel production requires large amounts of land, water and fertilizer and could reduce potential food supplies.

Price is another concern, although, the current price of fossil fuels is expected to rise with a price on carbon and regulatory changes

Along with production and price of biofuels, another potential challenge is having the right equipment including engines that can burn biofuels. Still a newer source of energy, there is also little long-term data on biofuel application in Marine propulsion. Several marine companies are taking the lead in testing the potential biofuel use.

Logistics giant Maersk, which was the first major shipping line to pledge to be carbon neutral by 2050, launched trial programs to test biofuel blends. In one, Maersk Supply Service and The Ocean Cleanup partnered to purchase 90MT HVO biofuel (Hydro-treated Vegetable Oil), with the mixing rate set at 15% HVO and 85% Low Sulfur MGO (Marine Gas Oil). According to the Maersk announcement, “at this rate and with current fuel efficiency, the HVO was able to cover 2 separate 6-week trips, with a total saving of 38.95 MT CO2. The savings were approximately 90% CO2 on the emissions from the HVO itself – that is, 13.5% of the total.”

Recently Maersk announced it will order eight new ocean-going ships that will use only carbon-neutral fuels to hit its net-zero goal by 2050. The vessels will have a dual fuel engine setup that can run either methanol and conventional low-sulfur fuel.

More recently, French shipping and logistics major CMA CGM launched a pilot program with the support of the Maritime and Port Authority of Singapore (MPA) On February 23, 2022, its vessel, APL Paris, was the first of the group’s vessels to be bunkered with biofuel in Singapore. The 6-month global trial will involve up to 32 containerships running on different blends of biofuel to measure carbon dioxide (CO2) and nitrogen oxide (NOx) emissions to develop a trend analysis.

### Operational risks

The use of biofuels is still relatively new in the industry. Marine businesses looking to convert to alternative fuels need to be wary of their associated risks including:

- Microbial growth, excessive formation of sludge, can lead to fuel contamination, clogged or fouled equipment, and if unchecked, even engine failure.

- Oxygen degradation: Deposits in piping and engines could form, compromising operational performance.

- Corrosion: Biodiesel are more corrosive and with higher degradation potential than diesel fuels.

- Possible degeneration of rubber sealing, gaskets and hoses.

- Low temperature: Biodiesels in higher concentration usually have a higher cloud point than diesel (depending on feedstock), leading to poor flow properties.

- Conversion: Biodiesel displays a solvent property different from petro-diesels, so when switching from diesel to biofuel it is expected that deposits in the fuel system will be flush, dissolved and may potentially clog fuel filters. It is recommended to flush the system and/or to monitor filters during this period and change them shortly after switching to the blends.

- Limited expertise within the shipping sector for handling of some biofuels, and lack of long-term fuel test data to guarantee the safety and continued reliability of the selected fuel. Most of marine engine manufacturers give conditional warranty against the use of biodiesel in the engines (engine makers position may vary) due to different characteristics of combustion.

- Lack of regulatory standards: ISO marine fuel standard (ISO 8217:2017) did not cover the wide scope of biofuels now offered to the marine market, which may include up to 100% biofuel, and only sets specifications for distillate fuels containing up to 7.0% FAME. Fueling a ship with biofuel may also require some operational and maintenance considerations. Best practices handling biofuels include:

- Ensure consultation with engine makers: Engine makers need to be consulted beforehand to verify what type of blends can be used with specific type of the engine. Some makers may not offer any extended warranties either in case the biofuels are used or older generation engines are supplied with any type of blends or higher blends, then indicated by the maker; have been used. Shipowners are urged to get confirmation letter from the engine makers, their dealer or supplier explicitly providing specification of biofuels, which may be used in those engines.

- Consideration of ambient & sea water temperature of operating regions: Biodiesels in higher concentration usually have a higher cloud point (refers to the temperature below which wax in diesel or biowax, forms a cloudy appearance in biodiesels) than diesel (depending on feedstock), leading to poor flow properties. The presence of solidified waxes thickens the oil and clogs fuel filters and injectors in engines. The wax also accumulates on cold surfaces and forms an emulsion with water (producing, for example, pipeline or heat exchanger fouling). Therefore, cloud point indicates the tendency of the oil to plug small orifices or filters at cold operating temperatures. It is therefore important to know the product’s cold flow properties and to keep the storage and transfer temperatures above the cloud point.

- Identify availability of biofuels in the region and access to supply hubs, existing infrastructure: Biofuels are not commonly available in every port or region of the world. Therefore, proper analysis of available infrastructure shall be done prior to the decision being made to operate the ships on biofuels within specific geography. Although the vessels would be able to combust traditional fuel, the changeover procedure, maintenance regime and fuel storage capacity on board the vessel may create additional challenges.

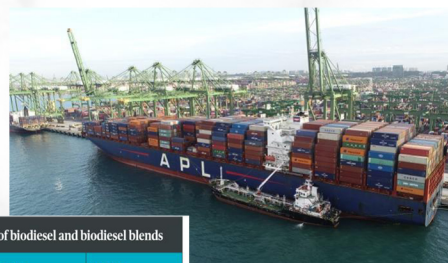
- Placing specific testing procedures: ISO marine fuel standard (ISO 8217:2017) did not cover the wide scope of biofuels now offered to the marine market, which may include up to 100% biofuel, and only sets specifications for distillate fuels containing up to 7.0% FAME (fatty acid methyl esters). The ISO committee is working on a draft version of the new ISO 8217 standards, which may be named as (8217:2020) but has not been released yet. The blends with higher content of biofuel are subject to other standards, mainly applicable to automotive industry. In such cases other fuel shall be tested against those standards in addition to ISO 8217:2017.

- Vetting of suppliers of biofuel (vendor management list): Keeping vendor management program is an utmost important tool to receive fuels, meeting specific chemical, physical compositions and kinematic viscosity. A supplier shall demonstrate long presence on the market, existing relation with the buyer and good track record of supplies. Vendor management program monitors trends of supplies in terms of quantity and quality against the test results from the laboratory, to ascertain seamless operation of engines. Any type of opportunistic purchase of fuel from unknown suppliers shall be avoided. In case the supplier is new to the buyer, latter shall make sure to test the fuel after receiving it and not to use any before the results are received from the laboratory. The fuel shall meet contractually agreed specification and quantity.

- Update maintenance regime for ship’s engine for any additional services required: Engines operating on biofuels may be subject to different maintenance and overhauling regimes due to different properties than petro diesels. Some blends may require more frequent replacement of components, cleaning of tanks, pipelines, filters or use a spare part designed to work with the type of biofuel. The best source of such information will be engine makers and also fuel testing organization. All shall be included in bespoke operating instruction for the engine.

- Training of crew: Ultimately the crew on board will be in charge of operating the ship and her engine. Not only safety but also commerciality of the ship’s operation, especially eliminating any downtimes, are on stake. Therefore, proper training and understanding of limitation of biofuels must be well-known to the crew. Not only limitations but maintenance and some specific properties of blends shall be well known. Human element is one of the most important but last safeguards against misuse of fuels. Use of biofuels is showing promising results and may have a significant impact in helping the marine industry reach its emissions-cutting goals. Carefully managing the operational risks associated with biofuels will continue to test the viable alternative fuels and will assure that the industry continues to make progress, doing its part to minimize climate change risks.

Sourced from:  
Sea Trade Maritime News  
By: Jarek Climczak



Risks and Guidelines associated with the use of biodiesel and biodiesel blends			
Risk/Recommendation	B5	B6-B20	B21-B100
Risk of reduction of oil change intervals	Negligible	Low	High
Risk of fuel filter compatibility	Negligible	Low	Medium
Risk of fuel filter change interval	Negligible	Medium	High
Bulk Filtration of biodiesel	<4 microns absolute	<4 microns absolute	<4 microns absolute
Energy content of biodiesel	Similar to diesel	Minor loss of 1-2%	Detectable loss of 5-8%
Compatibility with elastomers	Low	Low-Medium	High
Risk of low ambient temperature problems for both storage and operation	Medium	Medium-High	High
Feedback impact	Medium	Medium	High
Risk of oxidation stability and injector deposits	Low	Medium	High
Oxidation stability-duration of storage	Similar to diesel fuel	8 months**	4 months**
Use in engines with limited operational time	Maximum allowed	Unaccepted	Unaccepted
Risk of microbial contamination and growth	Medium	High	High
Need for water removal	Medium	High	High
Oil seal incompatibility	Negligible	Medium	High
Metal incompatibility	Negligible	Low	High

## TotalEnergies To Invest Oil Cash In LNG And Renewables

French oil major TotalEnergies SE plans to use part of its cash bonanza generated from surging hydrocarbon prices to speed up investment in liquefied natural gas projects and renewables.

"This might be an opportunity to accelerate the transition," TotalEnergies Chief Executive Officer Patrick Pouyanne said on a call with analysts Thursday after the company reported its first-quarter profits rose threefold as oil and gas prices surged. "If we move, it will be primarily in either the LNG fields and/or in electricity and renewables," he said, referring to the company's potential acquisitions.

European nations are trying to find alternative supplies to Russian oil and gas and accelerate the shift toward renewables as President Vladimir Putin's invasion of Ukraine exacerbates the continent's energy crisis. The war has fueled concern over supply security across Europe after Moscow cut off gas supplies to Poland and Bulgaria for failing to comply with a new payment mechanism.

While soaring oil and gas prices are expected to boost Big Oil's first-quarter profits, sanctions aimed at isolating Moscow are also halting the development of LNG projects in Russia, muddying the outlook for future supplies.

"I'm not a very big fan of very large-scale acquisitions," because integration is important, Pouyanne said. He added that the company's multibillion purchases of A.P. Moller-Maersk A/S's oil and gas unit, as well as some of Anadarko Petroleum Corp.'s Mozambique assets in recent years "were well done."

The company is also using some of its first-quarter cash flow to reduce debt, increase shareholders' returns, and make additional investments to support short-term gas production in the North Sea. TotalEnergies will spend near \$15 billion this year -- up from \$13.3 billion in 2021 -- a quarter of which will be invested in renewable energy and power projects.

The \$15-billion spend for this year will be capped, Pouyanne said, meaning that any large acquisition would be offset by divestments.

"There is nothing specific in our mind, let's be clear; just the will from the board to use part of these exceptional cash flows to accelerate our strategy," Pouyanne said. "In renewables, there is a big bubble."

Following this week's acquisition of a solar farm developer in the U.S., TotalEnergies expects to participate in more M&A deals in the coming months, Pouyanne said. Beyond LNG projects in the U.S., Mozambique, and Papua New Guinea, the company may outline its strategy for growth in the super-chilled fuel market amid sanctions on its Arctic LNG 2 project, he said.

SOURCE: RIGZONE/BLOOMBERG 2022



## Miami-based Atlas Renewable Energy enters wind market

Miami-based Atlas Renewable Energy, a developer of solar projects in Latin America, is expanding into the wind market.

Atlas said it entered into its first long-term wind power purchase agreement, contracting with Enel for 1.3 TWh per year to be generated by a 417 MW project portfolio in Chile.

The wind portfolio features three projects that are expected to reach operation in 2025. The projects will be located in the Araucania, Los Lagos and Maule regions of Chile.

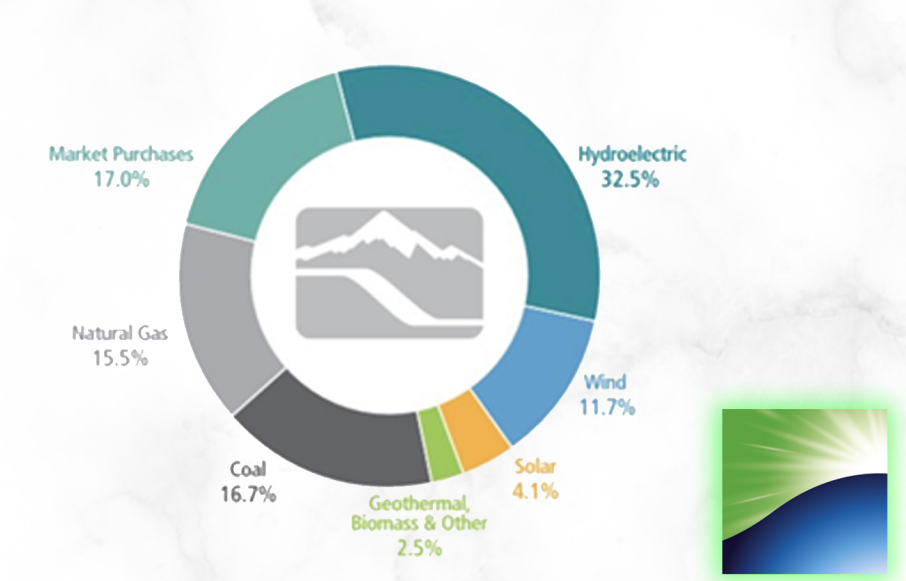
"Our first wind energy project solidifies our position as a company capable of developing different renewable technologies and adapting to the needs of customers in multiple markets across the globe," said Alfredo Solar, general manager of Atlas Renewable Energy in Chile.

Atlas has developed more than 400 MW of utility-scale solar projects in Chile.

The company's most recent project, the 230 MW Sol del Desierto Solar Plant was commissioned in March. Engie signed a 15-year power purchase agreement for the energy generated by the project.

### Idaho's largest solar energy project starts construction

Construction is now underway on what is expected to become the largest solar project in Idaho.



Idaho Power's energy resource mix in 2021, including generation from company-owned plants (62%) and purchased power (38%). (Source: Idaho Power)

Duke Energy Sustainable Solutions is developing the 120 MW Jackpot Solar project in Twin Falls County, the utility subsidiary's first utility-scale project in Idaho.

Idaho Power secured a 20-year power purchase agreement for energy generated by Jackpot Solar to support the utility's goal of providing 100% clean energy by 2045.

The Jackpot Solar project is expected to be operational by the end of the year.

Swinerton Renewable Energy was selected for engineering, procurement, and construction on the project. Duke Energy Sustainable Solutions will own and operate the project.

In 2021, renewable energy sources generated 74% of the electricity in Idaho, the fourth-highest share of renewable electricity for any state after Vermont, South Dakota, and Washington, according to the U.S. Energy Information Administration.

Idaho also enjoys some of the lowest electricity prices in the country, largely due to its hydro generating capacity that delivers more than half of the state's power.

As recently as 2015, Idaho did not have a single utility-scale solar project. By the end of 2021, Idaho had 612 MW of solar capacity installed, representing investment of \$901 million, according to the Solar Energy Industries Association.

At 120 MW, Jackpot Solar is expected to pass what's believed to be the largest utility-scale solar project in Idaho, the 108 MW Grandview PV Solar Two project installed in 2016.

SOURCE: RENEWABLE ENERGY WORLD  
By: John Engel

## A FEW GOOD MEN ARTICLE

Gomburza, alternatively stylized as GOMBURZA or Gomburza, refers to three Filipino Catholic priests, Mariano Gomez, Jose Burgos, and Jacinto Zamora, and who were executed by garrote on February 17, 1872, in Bagumbayan, Philippines by Spanish colonial authorities on charges of subversion arising from the 1872 Cavite mutiny. The name is a portmanteau of the priests' surnames.

Mariano Gomes de los Angeles was a well-known Roman Catholic priest during their time, art of the trio accused of mutiny by Spanish colonial authorities in the Philippines in the 19th century. Gomez was the child of Alejandro Francisco Gomez and Martina Custodia. He was born in the suburb of Santa Cruz, Manila on August 2, 1799. He was a Tornatras, one born from mixed native (Filipino), Chinese, and Spanish ancestries. He studied at the Colegio de San Juan de Letran and later studied theology at the University of Sto. Tomas, preparing himself for the priesthood in the Seminary of Manila. Gomez was designated as the head priest of Bacoor, Cavite on June 2, 1824. He also taught for the agriculture and cottage industries aside from taking care of spiritual necessities. He fought for the rights of his fellow native priests against Spanish abuses. He was also active in the publication of the newspaper La Verdad. On February 17, 1872, he was one of the priests executed due to the false accusations of treason and sedition, taking a supposed active role in the Cavite Mutiny. He was later on sentenced to death by garrote in a military court at Bagumbayan field.

Jose Apolonio Burgos y Garcia was born in Vigan, Ilocos Sur on February 9, 1837, and was baptized on the 12th of the same month. His parents were Jose Burgos, a Spanish lieutenant in the Spanish militia of Ilocos, and Florencia Garcia, a native of Vigan. During his early teenage years, he studied at the Colegio de San Juan de Letran and later went to the University of Santo Tomas, receiving a Bachelor of Philosophy in 1855, Bachelor of Theology in 1859, Licentiate in Philosophy in 1860, Licentiate in Theology in 1862, Doctor of Theology, and Doctor of Canon Law in 1868.

Jacinto Zamora y del Rosario was born on August 14, 1835, in Pandacan, Manila. His parents were Venancio Zamora and Hilario del Rosario. He studied at the Colegio de San Juan de Letran and graduated with a degree of Bachelor of Arts. He later transferred to the University of Santo Tomas and obtained a degree of Bachelor of Canon and Civil Laws. He prepared for the priesthood in the Seminary of Manila. He had dreamt of becoming a priest at a young age. After being given ministerial and priestly authority, Zamora was able to establish parishes in Marikina, Pasig, and Batangas and was assigned to also oversee Manila Cathedral on December 3, 1864.

Gomburza incurred the hatred of Spanish authorities for fighting for equal rights among priests and leading the campaign against the Spanish friars. They fought on the issues of secularization in the Philippines that led to the conflict of religious and church seculars.

Their execution had a profound effect on many late 19th-century Filipinos; Jose Rizal, later to become the country's national hero, would dedicate his novel El filibusterismo to their memory. Mutiny by workers in the Cavite Naval Yard was the pretext needed by the authorities to redress a perceived humiliation from the principal objective, José Burgos, who threatened the established order:

During the Spanish colonial period, four social class distinctions were observed in the islands: Spaniards who were born in Spain, peninsulares; Spaniards born in the colonies of Spain (Latin America or the Philippines), insulares or creoles; Spanish mestizos, Chinese or 'Indios' (natives) dwelling within or near the city (or town), and the church; and Chinese, Sangley, and rural Indios.

Burgos was a Doctor of Philosophy and Arts] whose prominence extended even to Spain, such that when the new Governor and Captain-General Carlos Maria de la Torre arrived from Spain to assume his duties, he invited Burgos to sit beside him in his carriage during the inaugural procession, a place traditionally reserved for the archbishop and who was a peninsular Spaniard. The arrival of the liberal de la Torre was opposed by the ruling minority of friars, regular priests who belonged to an order (Dominicans, Augustinians, Recollectos, and Franciscans) and their allies in civil government. It was supported by the secular priests, most of whom were mestizos and darnas assigned to parishes and far-flung communities, who believed that the reforms and the equality that they wanted with peninsular Spaniards were finally coming. In less than two years, de la Torre was replaced by Rafael de Izquierdo.

Gomburza's death influenced the novel of Rizal "El Filibusterismo".

### Martyrdom

The execution of Gomburza remains one of the most controversial issues deeply embedded in Philippine history. However, their tragic end led to the dawn of Philippine Nationalism in the 19th century, intensified by Dr. Jose P. Rizal, in dedicating his second novel entitled El Filibusterismo which condemned the Spanish rule and the elite Filipinos. In his novel, Rizal wrote "To the memory of the priests, Don Mariano Gomez (89 years old), Don Jose Burgos (40 years old), and Don Jacinto Zamora (55 years old). Executed in Bagumbayan Field on 25th of February, 1872. The church, by refusing to degrade you, has placed in doubt the crime that has been imputed to you; the government, by surrounding your trials with mystery and shadows causes the belief that there was some error; committed in fatal moments; and all the Philippines, by worshiping your memory and calling you martyrs, in no sense recognizes your capability. In so far, therefore, as your complicity in the Cavite Mutiny is not proved, as you may or may not have been patriots, and as you may or may not cherish sentiments for justice and liberty, I have the right to dedicate my work to you as victims of the evil which I undertake in combat." It must be noted, however, that Rizal's account was erroneous in detail as the execution took place on February 17, 1872, not on February 28, 1872, as Rizal mistakenly mentions. Additionally, the ages of the priests were listed down inaccurately. At the time of the execution, Gomez was 72 years old, Burgos was 35 years old, and Zamora was 36 years old.

Their deaths were facilitated in a public execution at Bagumbayan (Luzon) using a garrote due to false accusations charged against them by Spanish authorities. Their alleged crimes included treason and sedition for being the supposed masterminds of the insurrection of Indios (native Filipinos) working in the Cavite arsenal. Furthermore, according to the Spanish military tribunal, they were believed to have been a part of a clandestine movement aimed to overthrow the Spanish government, making them a threat to the Spanish Clergy. The execution has since been labeled the Terror of 1872 and is recognized as a pivotal event contributing to the later Philippine Revolution from 1896 to 1898.

### Historical accounts

Historical marker for the Gomburza National Monument in Manila



The Execution was documented by a Spanish historian named Jose Montero y Vidal who wrote a book entitled Historia General de Filipinas that centers on a Spaniard's perspective of the Cavite Mutiny. The inclusion of biased story-telling of the reasons for the execution of Gomburza later gained widespread criticisms.

Vidal's account was corroborated by the then Governor-General Rafael Izquierdo y Gutierrez. In his report, he narrated that the abolition of privileges enjoyed by the workers of Cavite arsenals caused the "revolution". He also blamed the media, specifically the Spanish press, regardless of democratic, liberal, or republican affiliation, for the circulation of unrestrained media. The latter is said to have featured propaganda such as overthrowing a secular throne, which allegedly inspired the Indios (native Filipinos) to organize the mutiny. General Izquierdo also mentioned the native clergy being a part of the rebels who were against the Spanish friars. The clergy supposedly wanted to end the hold of Spain over the Philippines to elect a new hari who would rule the land and named Fathers Jose Burgos and Jacinto Zamora to be the ones responsible. The accounts of these two Spaniards supported one another; thus pointing to a planned conspiracy among educated leaders, mestizos, abogadillos, Manila and Cavite residents, and native clergy. Furthermore, on June 20, 1872, the feast of the Virgin Loreto was celebrated in the district of Sampaloc, involving a fireworks display as a normal tradition. However, according to Izquierdo and Vidal, the fireworks mislead those in Cavite, causing them to attack Spanish officers, fulfilling republican wishes to eradicate the Spanish presence. There was also a mass murder of friars, which made the arrest of Gomburza legal. Through a quick court trial, they were sentenced to death by strangulation.

However, speculate arise with their swift end that stirred the public, with some of the controversies published by Philippine News Agency. The reports stated that the Spanish prosecutors bribed a witness to testify against the three priests who were charged with sedition and treason, which led to their death by garrote. Moreover, according to Edmund Plauchut, as quoted by Jaime Veneracion, late on the night of February 15, 1872, the three priests were found guilty of treason as instigators of mutiny in the Cavite Navy-yard and were sentenced to death by Spanish Court martial. The judgement of the court was read to the priest in Fort Santiago the next morning, and they were told that they would be executed the following day (February 17, 1872). After they heard the sentence, Burgos broke into sobs, Zamora lost his mind and never recovered it, and only Gomez listened impassively.

Almost forty thousand of Filipinos, who were at different places surrounding the platform, witnessed the execution of the Filipino priest and saw Saldua (the artilleryman who testified for the conviction of the priest). When Gomez's confessor, a Recollect friar, exhorted him loudly to accept his fate, he replied: "Father, I know that not a leaf falls to the ground but by the will of God. Since He wills that I should die here, His holy will be done."

Nonetheless, Dr. Trinidad Hermenegildo Pardo de Tavera, a Filipino scholar and researcher, informed the world of the Filipino side of the controversy.

According to him, it was a mere mutiny by the laborers of the Cavite arsenal for their dissatisfaction from the abolition of their privileges due to the orders of General Izquierdo on January 20, 1872. About 200 men, including soldiers, laborers, and residents of Cavite, headed by Sergeant Lamadrid, assassinated all Spanish officers in sight, including the commanding officer. But then, Gen. Izquierdo, along with the friars, exaggerated the event to alarm the Spanish Government in order to delay installing reforms for the native Filipinos. Such reforms included the establishment of a school of arts and trades, which aimed to improve the education of Filipinos but would mean that the friars would lose their power in the government. Gen. Izquierdo took advantage of the event to instill fear in the minds of native Filipinos. Unfortunately, the Spanish Government in Spain relied on the report of Gen. Izquierdo and made no more attempts to investigate the issue. They believed that the said movement was indeed a big and well-planned conspiracy to dissolve the Spanish Sovereignty in the Philippines.

## Cavite mutiny

Main article: 1872 Cavite mutiny

The so-called Cavite Mutiny of workers in the arsenal of the naval shipyard over a pay reduction produced a witness willing to implicate the three priests, each of whom was summarily tried and sentenced to death by garrote on February 17, 1872. The bodies of the three priests were buried in a common, unmarked grave in the Paco Cemetery, in keeping with the practice of burying enemies of the state. Notably, in the archives of Spain, there is no record of how Izquierdo, a liberal, could have been influenced to authorize these executions. Gregorio Meliton Martinez, the Archbishop of Manila, refused to defrock the priests, as they did not break any canon law. He ordered the bells of every church to be rung in honor of the executed priests. The aftermath of the investigation produced scores of suspects, most of whom were exiled to Guam in the Marianas.

## Recovery of remains

In 1998, the remains, believed to belong to the trio, were discovered at the Paco Park Cemetery by the Manila City Engineers Office.



## HR Trends for 2022: Future of Human Resource Management

### Michelle G. Valenciano Human Resource Manager

The past few years have redefined the human resource management industry in more ways than one. From a flexible work model to a holistic approach around employee well-being, 2022 will be the year HR adds value to the transformation it has witnessed in the recent past. What is worth looking forward to in the HR industry? What bends to look out for? This article will offer insights on what HR trends to expect from the industry and how they can impact the work, worker and workplace.

### Key Takeaways

- A flexible work model can reduce top talent attrition by 20%.
- Companies are transitioning from focusing on individual employee well-being to a more holistic approach for a healthy organization.

- Employee expectations have evolved beyond pay, benefits and perks — a sense of shared identity, interactions and a fulfilling employee experience are crucial for a successful post-pandemic business.
- Businesses are increasingly focusing on developing power skills, aka social, emotional and advanced cognitive skills.
- 52% of the workforce will have worked or will be working independently as a contributor to the gig economy by 2023.

### Trends We'll Look At

- Hybrid Work Model
- Transition From Employee Well-being To Healthy Organization
- DEI in the Spotlight
- Power Skills Play a Key Role
- Embracing the Gig Economy
- Keeping the Human Touch Alive
- Reskilling and Upskilling
- Cyber Security To Become Even More Important

But is knowing trends enough? This article will also offer an expert's advice on strategizing HR at your workplace in anticipation of these trends. After all, isn't success the result of preparation?

### Top 8 HR Trends for 2022

While 2020 pushed industries to panic and forced them to evolve, 2021 was the year of restoring balance with informed strategies while dealing with the aftermath of the global COVID-19 pandemic.

From supporting employees during trying times and staying compliant with vaccination protocols to preparing for ever-evolving virus variants — companies were busy learning, unlearning and strategizing for the future.

Understanding these annual shifts is crucial for any industry to keep pace with the rapid developments taking place, especially in light of the pandemic. To that end, we've consulted industry leaders and experts to learn the top HR trends so you can make informed decisions for your organization.

#### 1. Hybrid Work Model

With things getting back on track, the workplace is evolving into a more suitable approach for its employees and their productivity — the hybrid work model. It's an employee-centric flexible work model that includes a mix of in-office and remote work.

Back in May 2021, Google's CEO, Sundar Pichai, announced the company's hybrid work plan, which allowed employees to work from the office for three days a week and remotely on the other two days. "The future of work is flexibility," said Pichai. Some other companies which hopped on the hybrid work bandwagon include Ford, Hubspot, Microsoft, Infosys, Siemens and Amazon, to name a few.

We asked Dr. Steven V. Cates, Graduate Professor of Human Resources Management at Purdue University Global, for his thoughts on the hybrid work model. His opinion resonated with ours:

Based on the continuation of the pandemic and issues surrounding the safety and welfare of employees the traditional office environment is being replaced with different work models that companies are finding acceptable."

66% of industry leaders are considering redesigning their workplace for hybrid work, according to a report by Microsoft. With more and more companies opting for this approach, we can rightly conclude that the hybrid work model is here to stay for the foreseeable future.

Having said that, Cates also suggests, "When considering the future of work, location shouldn't be the main focus. Rather than focusing on in-person versus remote, what should be focused on is how to keep employees engaged and productive in different environments."

#### 2. The Transition From Employee Well-being To Healthy Organization

The past couple of years finally witnessed employee mental health and well-being getting its due focus at the workplace. Over 68% of senior HR administrators rated employee well-being and mental health as a top priority in the 2021 HR Sentiment Survey. What can we expect to unfold on that front, keeping in mind the shock, frustration and uncertainty following the pandemic?

The answer lies in the Healthy Organization — a holistic and more inclusive enterprise-wide approach to well-being. This concept goes beyond the physical health and safety of the employees and aims at providing more flexibility and opportunities for their training and empowerment. The Healthy Organization framework includes the following elements:

- Physical Health
- Mental Well-being
- Financial Fitness
- Social Health and Community Service
- Safe Workplace
- Healthy Culture

Having gone through a deadly pandemic that has impacted the workers and the workplace, it's safe to say that a Healthy Organization would be a welcome trend for better productivity and greater employee satisfaction, leading to employee retention.

#### 3. DEI in the Spotlight

Diversity, equity and inclusion have been buzzwords in most organizations for a while now, and rightfully so. DEI initiatives are a part of addressing bias, discrimination, harassment, unfair wages and other issues at the workplace. The need for DEI has also increased with the evolving work models — from in-person to virtual and hybrid environments.

79% of respondent companies plan on increasing the DEI budget in 2022, according to a report by TruLiant. But money isn't enough to eradicate deep-rooted problems. The report also mentions that only 13% of senior executives proactively support DEI initiatives, highlighting the need for developing more DEI leaders to make positive changes in the workplace behavior and culture.

According to a study by SHRM in partnership with Harvard Business Review Analytic Service, companies can follow these measures to improve DEI in 2022:

- Create a hotline for reporting DEI incidents with a warm line for advice and coaching on the subject.
- Utilize employee resource groups and networks to their full potential.
- Diversify hiring panels.
- Create a DEI steering committee.
- Offer membership and sponsorship opportunities.
- Provide reminders to be wary of biases that can creep in subconsciously.

#### 4. Power Skills Play a Key Role

The workplace is evolving, and so are its requirements. In a virtual work environment, companies require more than just technical skills to maintain overall productivity. Employers are actively looking for power skills in their new hires. 63% of employers prefer to hire someone with transferable skills — teamwork, time management or leadership and train them for the technicalities of the job.

Power skills are behavioral in nature. With technological leaps, technical skills can be taken care of, but it is the power skills that take the effort and help an employee stand out. Steven Cates lists leadership, teamwork, communication, problem-solving, work ethic, adaptability and people skills as some of the major power skills recruiters are seeking.

Dave Millner, Founder and Consulting Partner at HR Curator, believes that power skills are the future of effective operation management in a disruptive world. Thus, managers and leaders with these skills should be top priority recruits, and development options must be made available to hone these skills. He also reasons the increasing importance of power skills with the following pointers:

- Preservation: Robots and automation cannot replicate behavioral or power skills effectively. Power skills, therefore, can help protect jobs.
- Performance: The areas of engaging talent and inspiring people have as much impact on leadership performance as delivering results and business intelligence.
- Communication: Connecting with colleagues/peers with different working patterns (hybrid, remote and office workers) is more important now than ever. The ability to engage with employees depends not just on leaders and managers having the power skills but also applying them more frequently.
- Workplace Environment: Power skills create an efficient work environment to build a sense of belonging among employees where they enjoy their work and learn continuously.
- Customers: Customers are more likely to buy people than process, and that is about their attitude and behaviors that they demonstrate to them.

With an increasing demand for power skills, 2022 will be an interesting year to witness the thought and innovation that will go behind helping employees further these skills at the workplace.

#### 5. Embracing the Gig Economy

The gig economy is not a new kid on the block. The term was first coined in 2009 to describe the upcoming workforce trend that relied on free-floating projects, consultancies and part-time job opportunities in a digital marketplace. Interestingly, the gig economy concept is way older; dating back to the 1900s when enterprises allowed temporary workers to fill in gaps within the workforce.

With the recent turn of events, along with a wide array of opportunities for workers to learn and develop new skills, the gig economy graph is rising for good. 86.5 million people will be freelancing in the U.S. in 2027 and will make up 50.9% of the total U.S. workforce, according to a report. Some of the reasons for this hike are:

- The gig economy offers a certain scale of flexibility to workers. With the disturbances caused by the pandemic, more and more full-time workers are now turning to gig opportunities out of necessity.
- With full-time employees taking up gig opportunities, there's a cost advantage for businesses dependent on gig workers.

We anticipate that 2022 will embrace the gig economy with plans and policies to retain gig workers and improve cost efficiency. It will also be interesting to note the measures that companies will employ for the protection and benefits of freelancers.

#### 6. Keeping the Human Touch Alive

"We are seeing the Great Resignation that has resulted in (U.S. Bureau of Labor Statistics, 2021) over 4 million Americans quitting their jobs in July 2021 alone. Resignations peaked in April, 2021, and have remained abnormally high since that time. The U.S. had a record-breaking 10.9 million open jobs at the end of July," Cates said.

What could be the main cause of the Great Resignation? What drastic changes has the workplace witnessed in the recent past?

The remote working environment cropped up issues regarding employee engagement and organizational identification. A survey by Promoleaf highlights that 46% of employees felt there was a lack of support from their employers, and 45% felt overworked. This makes the importance of keeping the human touch alive now more than ever.

"What was lacking then and still is a strategic HR approach to how to 'connect' with employees in a human context so they don't feel isolated and alone and this results in less engagement and lower productivity," said Cates.

According to a report, "How Business and HR Leaders Can Rise to the Opportunity" by a professor, author, speaker and HR thought leader Dave Ulrich, management needs to reinvent both content (new ideas about people and organization) and process (ways to turn ideas into impact).

Along with pulse surveys and employee assistance programs, it's important to note that no technology can automate and replace empathy, engagement and loyalty in an organization, especially in a constantly shifting work environment.

#### 7. Reskilling and Upskilling

First, let's distinguish between reskilling and upskilling. In a few words, reskilling involves learning new skills, and upskilling refers to specializing in a core skill. But why is skill transformation needed? Efficient skill transformation helps:

- Better execute company plans and policies based on market and industry trends.
- Improve employee performance, productivity and satisfaction.
- Gain a notable advantage against competitors who didn't upgrade with new skill requirements.

77% of industry leaders suggested that retraining is very or moderately important for their organization, according to a study by McKinsey. Skill transformation requires assessment of present skill gaps and industry trends, development of an efficient strategy, and scaling of that strategy for seamless execution across the company. It's one of the most crucial investments that an organization can make as a part of its talent management strategies, and justifiably so.

#### 8. Cyber Security To Become Even More Important

According to CRA Business Intelligence, more than three-quarters of respondents (78%) had no more than 20% of their workforce working from home before the pandemic. Afterward, almost all (92%) organizations reported more than 20% of their employees were working from home.

With a scattered workforce, data breaches and security risks associated with the workplace have also increased. Over 74% of organizations attribute recent business-impacting cyber attacks on remote work tech vulnerabilities. Also, 82% of organizations have increased their cybersecurity budgets, with these funds accounting for up to 15% of total IT spending.

A largely remote workforce brings various security and data breach concerns — malware, social engineering attacks on unsecured and employee-owned devices, and phishing. Organizations are actively trying to improve cloud service security, transform digital roadmap and security technology, and incorporate efficient training programs to combat security threats for safeguarding company assets and data.

#### Tips To Prepare for Changes in the HR Realm

In a dynamic work environment, companies can never be prepared enough. Cates suggested some tips to strategize better for shifts in HR administration:

- Learning and developing efficient ways to engage employees at all times. The traditional model of contacting employees sporadically doesn't work, leading to a lack of engagement and motivation for employees feeling isolated.
- For employees working remotely, daily "virtual water cooler and coffee pot" conversations can allow them to check in and address their concerns. It provides them with a "voice" and an opportunity to seek ideas and exchange suggestions.
- Training, development and career discussions make employees feel wanted and suggest they have a future career with the organization.
- Checking in on employee mental health allows leadership to head off any major issues an employee might be experiencing.
- Embrace the Future
- 2021 was the year of the emergence of a new landscape, marked by lessons learned from the pandemic. 2022 will be the year to execute those lessons, along with improvements and in-depth efficiency.
- Combining traditional and remote work models will heavily influence organizations' operations. A holistic approach to employee well-being, skill transformations and a human touch will ensure quality work experiences despite ever-shifting paradigms. With changing skill preferences and the booming gig economy, it would not be far-fetched to say that HR might be in for surprises as the year progresses. Companies must strategize for these shifts in advance to avoid compromising on their overall productivity and growth.
- "This is an exciting time to be in HR and if challenge, innovation, change and personal growth are of interest to you, then stick around," Millner summarized.

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“April is the Anniversary Month  
of the Foundation of GIS.”

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